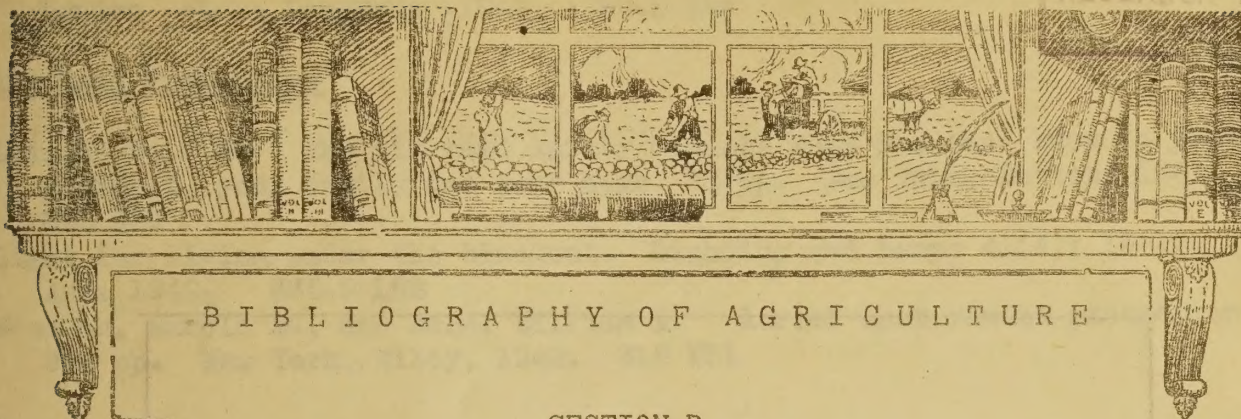


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SECTION B
AGRICULTURAL ENGINEERING

Vol. 1

July 1942

No. 1

The Bibliography of Agriculture is issued monthly in four sections.

Section A, Agricultural Economics and Rural Sociology.
Supersedes Agricultural Economics Literature.

Section B, Agricultural Engineering. Supersedes Current Literature in Agricultural Engineering.

Section C, Entomology. Supersedes Entomology Current Literature.

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Photoprint or microfilm copies of any publication listed may be obtained from the Library. Order blanks giving prices and method of payment will be sent on request.

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London [etc.], Longmans [1942], 30.2 G83

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Wessman, Harold E., and Rose, William A. Aerial bombardment protection.
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Ind. Agr. Expt. Sta. Rpt. 1940/41, pp. 21-22. Lafayette, 1942. 100 In2P

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Polivka, Jaro J. Concrete frames designed to save steel. Engin. News-
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Considerable saving of steel in reinforced-concrete structures can be attained through careful design and accurate analysis, based on experience and laboratory tests. Still greater reductions are possible by using light-weight fillers for one and two-way slabs. For one-way slab designs steel savings up to 47 percent are possible when compared with conventional designs, and with two-way construction a decrease of 56 percent may be obtained. Sample calculations are made available to show that use of fillers need not materially increase total costs.

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Study of the suitability of earth stabilized with emulsified asphalt for farm building construction as applied to a poultry laying house. Ind. Agr. Expt. Sta. Rpt. 1940/41, p. 21. Lafayette, 1942. 100 In2P

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Corrosion

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Meloy, G. S. Cotton ginners' part in producing more and better linters for defense use. Mid-So. Cotton News 2(8): 5. June 1942. 72.8 C8295

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[Smith, J. Craig] Ginners can help spinners and farmers. Amer. Wool and Cotton Rptr. 56(25): 11-13. June 18, 1942. 304.8 W88

Address before the Alabama Cotton Ginners' Association, Birmingham, Ala., May 27, 1942.

How better cleaning of cotton at gins will help solve the carding problems of the mills.

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Small combines take over grain harvesting job in the corn belt.

Fire Protection

Volunteer rural fire fighting. Dakota Farmer 62(12): 271. June 27, 1942.
 6 D14

Plans for developing fire fighting units in all farm and rural non-farm
 communities over country to prevent and combat fire dangers, greatly ag-
 gravated by war, have been announced by Secretary of Agriculture Wickard.
 Program calls for making local surveys of farm and rural fire hazards.
 Rural fire fighting companies of about 10 farmers each on community basis
 will be organized and trained in fire prevention and control. Inventory
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 water supplies on each farm and in each rural community, and provision
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Profit in milk cooling equipment. Impl. and Tractor 57(13): 10-11. June 20, 1942. 58.8 W41

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"The forthcoming report will describe a 'fair' substitute for rubber that can be used to retread tires, but not, at present, to make new ones. It is 'Thiokol' a chemical compound manufactured by the Dow Chemical Co. for the Thiokol Corp. of Trenton, N. J."

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"Scientists are now working on the idea of a divisible tractor, which could be turned into two small ones when needed."

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- Crafts, A. S. Weeds are tinder. Pacific Rural Press and Calif. Farmer 143(10): 345. May 16, 1942. 6 P112

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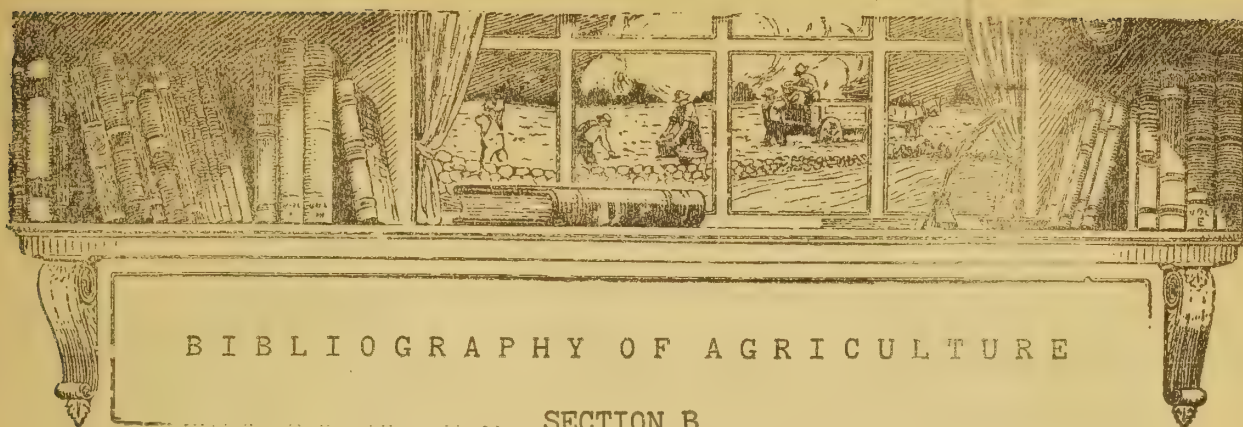
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SECTION B
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COTTON-COMPRESSION

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COTTON-FLEXIBLE FATIGUE

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COTTON FABRICS

BRITISH STANDARDS INSTITUTION. Moisture in relation to textile materials. Textile Inst. Jour. 33(6): S3-S6. June 1942. 73.9 T31

A revision of Tentative Textile Standard No. 4, 1940, to be issued as a "British Standard (Textile)."

DUNLAP, G. H. The past year in retrospect. Textile Bul. 62(9): 14, 52-53. July 1, 1942. 304.8 So82

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I.-Introductory review of the committee's work, by A. W. Bayes, pp. S7-S8; II.-Comparison of fabric tensile test results obtained in different laboratories, by B. D. Porritt, J. R. Scott, and H. W. Willott, pp. S9-S21; III.-Note on the variability of tensile strength tests on cotton fabric, by A. W. Bayes, pp. S22-S23; IV.-Some theoretical notes on the constant rate of traverse pendulum type cloth tester, by J. G. Martindale and H. J. Woods, pp. S24-S33; V.-The measurement of machine rate of load on constant rate of traverse type cloth testing machines,

by J. G. Martindale, pp. S34-S37; VI.-Methods of calibrating textile strength testing machines, by E. Bowen, p. S38; VII.-Method of calibration of horizontal pendulum type fabric tensile testing machine, by N. Goodbrand, p. S39.

COTTON GINS AND GINNING

BENNETT, CHARLES A., and GERDES, FRANCIS L. Cotton gin maintenance greatly helps operator. Better outturn and lower operation costs are among the many benefits. Cotton Trade Jour. 22(29): 7. July 18, 1942. 72.8 C8214

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BENNETT, CHARLES A. Gin operation as affected by the national emergency. Cotton Digest 14(40): 4, 12. July 4, 1942. 286.82 C822

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[BRITISH COTTON GROWING ASSOCIATION AT ZARIA] Cotton ginning in Nigeria. Cotton and Cotton Oil Press 43(15): 5-6. July 18, 1942. 304.8 C822

CALLAWAY, R. P. Organization and operation of New Mexico cooperative cotton gin associations. N. Mex. Agr. Expt. Sta. Bul. 293, 35pp. State College, May 1942. 100 N465

[GEORGIA COTTON GINNERS ASSOCIATION] Georgia ginner's re-elect same officers. Cotton and Cotton Oil Press 43(14): 17. July 4, 1942. 304.8 C822

Report of 11th annual convention held in Atlanta, June 17-18, 1942.

GERDES, FRANCIS L., and BENNETT, CHARLES A. Ginners can be very influential in furthering better cotton plan. Urge planters to be careful in picking and handling cotton. Cotton Trade Jour. 22(28): 1, 7. July 11, 1942. 72.8 C8214

GIN static licked by low cost humidifier. Cotton Ginners' Jour. 13(10): 13. July 1942. 304.8 C824

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REED, S. N. Need of cooperation in organization. Cotton Ginners' Jour. 13(9): 5, 12. June 1942. 304.8 C824

Excerpts from an address before the Texas Cotton Ginners' Association, Dallas, Apr. 10, 1942, reviewing the outstanding achievements of the Texas Cotton Ginners' Association.

STONE, L. T. Ginners are greatly affected by supplies, priority rulings. High rating needed for heavy machinery may cause great delay. Cotton Trade Jour. 22(27): 1, 7. July 4, 1942. 72.8 C8214

COTTON LINTERS

MELOY, G. S. Cotton ginners' part in producing more and better linters for defense. 4pp., processed. Washington, U. S. Agricultural marketing administration, 1942. 1.942 C5C823

VERDERY, M. C. Discussion of linter tests. Oil Mill Gazetteer 47(1): 5-10. July 1942. 307.8 O153

Tests to determine the best methods of producing mill run linters were conducted on a 141-saw Carver linter and a 141-saw Continental linter.

COTTON MACHINERY

BURGES, AUSTIN E. Has the picker for cotton arrived? Prog. Farmer, Tex. Ed. 57(8): 9. Aug. 1942. 6 T311

COTTON MILLS

ROYAL, B. ELLIS. Quaker meadows mills, inc. Textile Bul. 62(9): 30-32, 36, 38. July 1, 1942. 304.8 So82

The mill, which is described, is the "first completely new mill to be equipped with new machinery to be installed in the South since the early 1920's."

THE STANDARD MILL LIMITED, ROCHDALE. Modernisation in a coarse cotton spinning unit. Reconstruction and re-equipment in a single-unit Lancashire spinning firm with improvement of working conditions and extension of welfare. Textile Mfr. 68(810): 235-236. June 1942. 304.8 T3126

COTTON SPINNING

A., R. H. Internal reconstruction in cotton spinning - I. The urgent necessity for improvements in processing efficiency and conditions of working. Stack mixing and single process lapping. Textile Mfr. 68(810): 219, 231. June 1942. To be continued. 304.8 T3126

BOOTH, R. E. Production efficiency investigations. Time and efficiency study using winding as an example. Textile Mfr. 68(808): 141. Apr. 1942. 304.8 T3126

A method of analyzing the productive efficiency of any process is explained and illustrated by an application to the winding of cotton yarn from ring cop to cone. The method can be carried out without interference to production.

CAMPBELL, MALCOLM E. New method permits more accurate twist determination. Textile Res. 12(9): 3-7. July 1942. 304.8 T293

DUERST, JOHN. An interesting discussion on twist in roving. Cotton [Atlanta] 106(7): 126, 128. July 1942. 304.8 C823

Discussion of the Duerst formula.

DUNLAP, G. H. Comparative test data for cottons processed with different flat and licker-in speeds on the cards. Textile Bul. 62(10): 8-9. July 15, 1942. 304.8 So82

The third preliminary report in a series of card tests conducted by co-operating mills and sponsored by the Textile Foundation, the Arkwrights, and the Southern Textile Association.

DUNLAP, G. H. Comparative tests of cotton manufactured under normal and high speeds on cards equipped with metallic clothing. Textile Bul. 62(7): 12-13. June 1, 1942. 304.8 So82

GUY, W. J. Power transmission in mule spinning. Part I. Textile Rec. 59(709): 49-50, 51. Apr. 1942. 304.8 T311

JONES, ROBERT M. Long draft spinning; its history, present status, and future possibilities. Saco-Lowell Bul. 14(1): 22-39. Apr. 1942. 304.8 Sal

Address, Western Division, Textile Society of Canada, Hamilton, Ontario, Feb. 28, 1942.

KLAUBER, EDMUND. Application of synthetic rubber cots to spinning rollers. Textile Rec. 59(702): 41. Sept. 1941. 304.8 T311

"The choice of a suitable material for the covering of spinning machine rollers has been a difficult one in the past. Leather, the usual covering, has been superseded in some cases by cork. The introduction of synthetic rubber places in the hands of the spinner an alternative material for the purpose."

LANDAU, A. K. A little more production. Cotton [Atlanta] 106(6): 72-73. June 1942. 304.8 C823

Ways of increasing production in the spinning industry are noted. MECHANICAL and actual twist in warp yarn. Cotton [Atlanta] 106(7): 121-122. July 1942. 304.8 C823

A report of mill tests.

OSBORNE, JAMES. Speeding production in the drawing department. Textile Age 6(6): 52, 54, 56-57. June 1942. 304.8 T3132

OSBORNE, JAMES. Speeding production in the roving department. Textile Age 6(7): 54, 56, 58-59, 62-63. July 1942. 304.8 T3132

[SOUTHERN TEXTILE ASSOCIATION. EASTERN CAROLINA DIVISION] Card speeds, maintenance, conversion, on program of Eastern Carolina group. Textile Bul. 62(7): 14, 16, 39-42. June 1, 1942. To be continued. 304.8 So82

Stenographic report of a meeting held in Raleigh, N. C., May 9, 1942.

"SPINTECH." Factors affecting yarn regularity. Textile Weekly 29(743): 611-613. May 29, 1942. 304.8 T3127

[TEXTILE SOCIETY OPEN FORUM] Cotton mill problems. Raw cotton blending, opening and picking, variation in weight of card and drawframe slivers, card grinding and renewal of fillet discussed at open forum [held at Hamilton, Ont., Apr. 25, 1942.] Canad. Textile Jour. 59(11): 46. May 22, 1942. 304.8 C16

[WHITIN MACHINE WORKS] Factors affecting twist per inch in spinning.

Textile Bul. 62(10): 14, 40-41. July 15, 1942. 304.8 So82

The factors are: twist contraction, traveler lag and tape slippage.

COTTON YARN

SCHMIDT, C. C. Textile yarns as seen by the electric eye. Tex. Acad. Sci. Proc. 1940(24): 16-17. 500 T31P

"Thread or yarn is slowly moved through a narrow beam of light. As the diameter of the yarn changes more or less light falls on the photo-electric cell. The current from the cell is amplified and sent through a galvanometer. The galvanometer deflections are recorded on sensitized paper. The non-uniformities in the yarn are thus greatly magnified and are more easily analyzed. By changing the width of the beam of light records may be obtained for yarns of various sizes." - Entire item.

UNITED STATES TESTING COMPANY, INC. Testing in modern industry. 105pp. Hoboken, N. J., 1942. Bibliography, p.99. 290 Un396

Tests which the company is equipped to make on textiles and other products are briefly described. Tables of yarn numbers and diameters, regains, recommended humidities, wool grades, classification of raw silk, conversion of thermometer readings, atomic weights, strength and specific gravities of some solutions for dyers, and pH values of some chemicals used in the textile industry, are included.

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MAYS, J. R., JR. Cake sampling. Oil Mill Gazetteer 47(1): 18-19. July 1942. 307.8 O153

Instructions are given for taking samples of cottonseed cake for chemical tests.

PEARSON, EDGAR L. Cottonseed must be kept clean to increase value of linters. Presence of trash in linters is reducing cellulose content. Cotton Trade Jour. 22(23): 7. June 6, 1942. 72.8 C8214

STATEN, GLEN. Cottonseed treatments in New Mexico. N. Mex. Agr. Expt. Sta. Bul. 290, 32pp. State College, 1942. 100 N465

CROPS (DRYING)

ARMSTRONG, GRACE B., and BLACK, LULU S. Home drying of fruits and vegetables. Ill. Agr. Col. Ext. Cir. 533, [4pp.] Urbana, 1942. 100 116S

COSTS of drying fruit. Calif. Cult. 89(15): 377. July 25, 1942. 6 C12

DRYING food for victory meals. S. C. Agr. Expt. Sta. Cir. 216, [7pp]

Clemson, 1942. 275.29 So8E

HOWARD, JONAS. Drying fruits on the farm. Country Book 2(1): 17-19. Summer 1942. 6 C836

LANIER, KATHERINE. Drying foods at home. Ga. Agr. Col. Bul. 494, 24pp. Athens, 1942. 275.29 G29B

STOLLBERG, LOUISE. Hot to dry fruits and vegetables. Vt. Agr. Col. Ext. Brieflet 630, 7pp. Burlington, 1942. 275.29 V59E

SUN drying sweet corn. Wallaces' Farmer and Iowa Homestead 67(15): 424. July 25, 1942. 6 W15

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CLEGHORNE, J. W. Maintenance of soil-erosion dams. Farming in So. Africa 17(195): 378, 408. June 1942. 24 So842

POSFORD, JOHN A. Construction of an arch dam for temporary work. Inst. Civ. Engin. Jour. 4(17): 330-334. Feb. 1942. 290.9 In74J

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BROWN, HARRY L. Engineering contribution to war program in agriculture. Agr. Engin. 23(7): 231. July 1942. 58.8 Ag83

KABLE, GEORGE W. Engineers in war and peace. Agr. Engin. 23(7): 213-216. 58.8 Ag83

EROSION CONTROL

BEAUMONT, ARTHUR B., and KUCINSKI, KAROL J. Nature of soil erosion in Massachusetts. Mass. Agr. Expt. Sta. Ann. Rpt. 1941, p.10. Amherst, 1942.

"CROOKED farming" the trail to better living. A 3-act playlet to be presented by elementary school children. Mo. Agr. Col. Agr. Ext. Manual 10, 12pp. Columbia, 1940. 275.29 M69Ma

DOBSON, G. C., and EINSTEIN, H. A. The unexpected rejuvenation of George Creek. U. S. Soil Conserv. Serv. Soil Conserv. 8(1): 12-13, 22. July 1942. 1.6 So3S

"The case history of George Creek [in South Carolina] is the story of a small stream that has passed through a complete cycle of sedimentation within the time of men now living. The history of George Creek definitely proves that the rejuvenation of a stream is possible after its excessive sediment burden is removed, but it does not answer the important question of whether the lack of sediment alone will start the cutting or whether some direct assistance must be given to induce the process. The Sedimentation Division of the Soil Conservation Service is now studying this problem."

DON'T break sod for row crops. Oreg. Farm 65(12): 293. June 4, 1942.
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"The extra burden placed on irrigated areas in the growing of Food for Freedom food and feed crops has concentrated attention for the 1942 session on conservation and related measures aimed at maximum profitable production."

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- HOWARD, A. D. Pediment passes and the pediment problem. Jour. Morphology 5(1-2): 3-31, 95-136. Feb., Apr. 1942. 444.8 J826
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- McDIARMID, R. W. Gully reclamation. Experiences at Cowra experimental farm. Agr. Gaz. N. S. Wales 53(pt.5): 208-210, illus. May 1, 1942. 23 N472
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- ROBERTS, EDD. Grass-lined waterways resist erosion. Farmer-Stockman 55 (12): 335, illus. Aug. 1942. 6 Ok45
- SAVE your soil. Developing springs to furnish water for livestock in a conservation program for your farm or ranch. U. S. Soil Conserv. Serv. North. Great Plains Reg. Conserv. Fold. 11, illus. Washington, D. C., 1942. 1.6 So39C
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FARM MACHINERY AND EQUIPMENT

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- CENTURY of harvests. Wis. Agr. and Farmer 69(15): 1, 6. July 25, 1942. 6 W751
- CONSERVING farm machines. Farm and Ranch Rev. 38(7): 7. July 1942. 7 F223
- Machinery surveys conducted by Dominion Experimental Station, Swift Current, show that some farms in Western Canada are over-equipped; that less than 60 per cent of useful life of some machines is used up before being discarded. Individual ownership and operation of over-equipped farms is costly business even in normal peace times. Pooling of farm power and machinery in effort to reduce individual's cost of operation to reduce amount of labour required and to get maximum amount of work out of minimum amount of equipment at lowest cost, helps to overcome emergency with least interruption to wartime production.
- FARM IMPLEMENT NEWS. Buyer's guide: A classified directory of manufacturers of farm and garden implements, tractors, wagons and carriages, motor trucks, lighting plants, cream separators, gasoline engines, wind mills, pumps, wire fencing and the many accessory lines sold by implement dealers. 384pp. Chicago, Ill., Farm implement news company, 1942. 58 F223
- FENTON, H. J. Oh, for a hired man! Machinery is largely responsible for thinning out the ranks on the farm. New Eng. Homestead 115(14): 2, 8. July 11, 1942. 6 N442
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- LeCRONE, FRED. Combine adapted for spinach harvest. Market Growers Jour. 71(1): 250-251. July 1942. 6 M34
- McCUEN, G. W., and SILVER, E. A. Better combine operation. Ohio Farmer 190(1): 5, 17. July 4, 1942. 6 Oh3
- MECHANISATION of small farms. Farmer & Stock-Breeder 56(2746): 709. May 26, 1942. 10 F228
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- Manufacture of self-raking reapers is to be discontinued, while standardisation of horse-drawn binders means that these will only be obtainable in 5 and 6 ft. cuts. Four cutting widths of 5, 6, 7 and 8 ft.

are to be standardised for power binders. With regard to horse-drawn mowers, these will only be available with cuts of 3-1/2, 4 and 4-1/2 ft.

MORISON, F. L., and BAUMANN, ROSS V. Labor, power, and machinery on small farms in Ohio. Ohio Agr. Expt. Sta. Bul. 628, 38pp. Wooster, 1942.
100 Oh3S

1941 PRODUCTION figures. Impl. Rec. 39(5): 10. May 1942. 58.8 Im73

"P.G.M." potato planter. Impl. and Mach. Rev. 67(798): 516-517. Oct. 1, 1942. 58.8 Im72

QUAYLE, H. J. Pest control machinery demonstration. Calif. Cult. 89(13): 329. June 27, 1942. 6 Cl2

REDUCING corn harvesting costs. Calif. Cult. 89(14): 356. July 11, 1942.
6 Cl2

REDUCING machinery costs. Farm and Ranch Rev. 38(7): 7. July 1942. 7 F223

Methods which may be used to reduce farm machinery costs: (1) Do as much repair work with farm labour as possible; (2) Keep machines in good repair and in proper adjustment; (3) Purchase good second-hand or reconditioned tools to keep investment down and reduce depreciation; (4) Purchase special machinery such as ensilage cutters, hammer mills, corn binders, sheep shears, etc., jointly with neighbors; (5) Hire, rather than own expensive machines such as threshers, combines and hay presses, unless acreage handled will justify ownership of these machines; (6) Do custom work for neighbors whenever possible with large machines; (7) Select power units to meet needs of farm business and select equipment to fit power units; (8) Operate large enough farm enterprise to use machinery and equipment efficiently.

STOLTZ, E. H. Meeting the labor shortage with machinery. Farmer's Mag. 39(7): 7, 35, 43. 7 Cl65

Allan Roth, who operates a "really mechanized farm" near Baden, Waterloo County, Ont., thinks of his machinery as something which saves labor costs and multiplies "many times" the value of his time. His farming operations are described in this article.

TALLMAN, S. L. Farm and custom grain cleaners. Manitoba Dept. Agr. and Immigr. Pub. 171, 3pp., processed. Winnipeg, 1941. 275.29 M313

THOMPSON, ARTHUR T. Making hay in high gear. Wallaces' Farmer and Iowa Homestead 67(15): 417, 427. July 25, 1942. 6 W15

TRENCH diggers held to increase tile manufacturer's profits. Brick & Clay Rec. 101(1): 27-28. July 1942. 299.8 B762

Farm land reclamation work increases demand for trench diggers--More tile can be laid when trenches are dug quickly and efficiently.

TWO-WHEEL sickle bar mower cuts close to obstacles. Pop. Mechanics Mag. 78(2): 87. Aug. 1942. 291.8 P81

Cutting weeds along railroad track shoulders, ditches, banks, and around bridge pilings, trees, and other obstructions, is simplified with two-wheeled, heavy duty sickle bar mower, powered by two-horsepower gasoline engine. When working in close quarters or around obstacles, operator can release traction clutch and maneuver cutter by hand. For traveling from job to job, sickle bar may be left idle. It will cut weeds of any height, special deflector keeping cut plants from jamming bar. Mower cuts swath 40 inches wide, speed range being from one to four miles per hour.

WALKER, H. B. Machinery investigations show progress. Sugar Beet Jour. 7(10): 196-199. July 1942. 66.8 Su38

FENCES, ELECTRIC

USEFUL home-made electric fencer. New Zeal. Dept. Agr. Jour. 64(5): 339, 341. May 15, 1942. 23 N48J

FIRE PROTECTION

GIESE, HENRY. This year of all years, we can't afford hay fires. Successful Farming 40(8):14, 18. Aug. 1942. 6 Sul2

JOIN the army and fight this enemy on the home front. Wash. Farmer 67 (14): 331. July 2, 1942. 6 R151

Discusses farm fire-fighting project.

KING, A. S., and STERLING, R. H. Organizing for farm fire protection in Oregon. Oreg. Agr. Col. Ext. Bul. 591, 8pp. Corvallis, 1942. 275.29 Or32B

ROETHE, HARRY E. Fires on farms. U. S. Dept. Agr. Leaflet 44, 8pp. Washington, D. C., 1940. 1 Ag84L

WRIGHT, F. B. Fire prevention on farms. N. Y. Agr. Col. (Cornell) Bul. 509, 4pp. Ithaca, 1942. 275.29 N48E

YOU can "freeze" hay barn fires. Wis. Agr. and Farmer 69(15): 5, 19. July 25, 1942. 6 W751

FIREPLACES

SPECIFICATIONS for a fireplace that works. Household finance corp. Better Buymanship, Use and Care 20, pp.17-29. 1942. 321.8 H814

FLOCK

DOW, JAMES B. Flock--its manufacture, application and uses. Rayon Textile Monthly 23(7): 387. July 1942. To be continued. 304.8 R21

The term "flock" as used in this article applies to a product made from cotton, rayon or wool which is used in the manufacture of suede and velour fabrics.

FLOODS AND FLOOD CONTROL

HESS, E. L'action de l'herbe dans les bassins de réception des torrents. Jour. Fores. Suisse 93(6): 121-127, illus. June 1942. 99.8 J82

MORRIS, GEORGE A. Flood control for the Yazoo Valley, Miss. Civ. Engin. 12(5): 243-246. May 1942. 290.8 C49

U. S. WATERWAYS EXPERIMENT STATION. Model study of Mill-creek flood-control project, Cincinnati, Ohio. U. S. Waterways Expt. Sta. Tech. Memo. 188-1, 33pp., 87 pl. Vicksburg, Miss., 1942.

FLOW OF HEAT

HEAT flow through sunlit walls of one material. Heating and Ventilating 39(7): chart opposite 58. July 1942. 291.8 H35

HEAT from through sunlit wood frame walls. Heating and Ventilating 39(7): chart opposite 59. July 1942. 291.8 H35

FLOW OF WATER

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AGRICULTURAL ENGINEERING

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The edition of the Bibliography of Agriculture is so limited that we are unable to fill all of the requests which we receive for it. If you do not intend to file this publication permanently, please return it to the Department of Agriculture Library so that it may be made available to others.

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Describes a training course for girls in farm engineering and management and farm mechanics, sponsored by the National Farm Youth Foundation.

NATIONAL engineering institute established. Farmers Weekly [London]

17(2): 11. July 10, 1942. 10 F2226

Nucleus of the new Institute is Institute of Research in Agricultural Engineering at Oxford. Its main functions will be to act as general clearing house for information about agricultural machinery and its use, to carry out tests or demonstrations of new or improved implements, to undertake experimental and demonstration work on better utilization of existing equipment and to fill the gap between inventor and manufacturer by putting new ideas into practical shape and constructing prototype machine.

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Discusses the plan whereby the Argentine corn surplus is to be made into alcohol and sold to the United States, the productive capacity of Argentine factories, the method of making the alcohol, dry ice as a byproduct of alcohol manufacture, and the mechanical harvesting of corn as an element in reducing the cost of production.

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Includes three quotations from Broomhall's Corn Trade News which present a picture of the present food position in war-stricken Europe. In each instance reference is made to the value of maintaining the productivity of the soil. Discusses briefly methods for conserving the soil.
BUNCE, ARTHUR C. War and soil conservation. Jour. Land & Pub. Util. Econ. 18(2): 121-133. May 1942. 282.8 J82
Shows how a general soil conservation program must and can be modified to meet the emergency needs of war, and gives details of such a modified program with respect to land classification, Government policy respecting the various classes of land, and practical problems of planning, operation, and administration. Such programs for conservation should, in the author's belief, be conceived and executed in such a way as to ease the shock of post-war readjustment.
DANIEL, H. A., ELWELL, H. M., and MURPHY, H. F. Conservation and better land use for Oklahoma. Okla. Agr. Expt. Sta. Bul. B-257, 53 pp., illus. Stillwater, May 1942. Literature cited, pp. 50-53. 100 Ok4
DRAKE, KATHRYN. Soil defense in Oklahoma. A bibliography of soil conservation publications. Okla. Agr. Expt. Sta. Cir. C-97, 16 pp. Stillwater, Apr. 1942. 100 Ok4
DULEY, F. L., and RUSSEL, J. C. Using crop residues for soil defense. U. S. Dept. Agr. Misc. Pub. 494, 16 pp. Washington, 1942. 1 Ag84M
New methods of conserving moisture and soil that increase production

are of vital importance to war effort in which the farmers of United States are engaged. Some methods described will seem startling and revolutionary to many farmers. Nevertheless, because of their effectiveness in increasing production, these new ways of saving moisture and soil fertility are being used by more and more farmers in some of most important agricultural areas of United States. Some farm machinery that is described and shown may become unavailable as need of war material for our armed forces cuts down supplies of metals for home consumption; but principles and practices that are explained may play increasingly important part in obtaining greatly enlarged volume of food and fiber that our farmers must produce to insure victory.

- DUTCHER, ROBERT. Our right to ruin land. Farmer-Stockman 55(11): 309. July 1942. 6 Ok45
- FINNELL, H. H. Conservation pays off in the plains country. U. S. Soil Conserv. Serv. Soil Conserv. 8(1): 3-6, illus. July 1942. 1.6 So3S
- FINNELL, H. H. How much more waste can we afford? Estimates from the Southwest. Land 2(1): 75-78. 1941/1942. (To be concluded). 279.8 L22
- HANSEN, RALPH E. How to farm on the contour. S. Dak. Agr. Col. Ext. Cir. 392, 8 pp. Brookings, 1942. 275.29 So85
- IOWA AGRICULTURAL EXTENSION SERVICE. Soil conservation districts in Iowa. Ia. Agr. Ext. Serv. Leaf. no. 1, [4] pp. Des Moines, 1940. 275.29 Io9Le
- JACKS, G. V. Prospects for soil conservation. Endeavour 1(1): 33-35. Jan. 1942.
- LORD, RUSSELL. This kind of farming pays. Country Life 82(2): 27-28, 69-70, illus. June 1942. 80 C832
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- LOWDERMILK, W. C. The flag is on the plow. U. S. Soil Conserv. Serv. Soil Conserv. 7(12): 292-293. June 1942. 1.6 So3S
- LOWRY, S. J., and CALDWELL, L. M. Grass farming for improving depleted soils. Experiences at the Western Kentucky experiment substation. Ky. Agr. Expt. Sta. Cir. 52, 19 pp., illus. [Lexington, 1942] 100 K41
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- McKEEVER, IVAN. Neighborhood action. U. S. Soil Conserv. Serv. Soil Conserv. 7(12): 301-302. June 1942. 1.6 So3S
- MARYLAND STATE SOIL CONSERVATION COMMITTEE. What farmers say about soil conservation. Md. State Soil Conserv. Com. Bul. 2, 7 pp. College Park, 1942. 56.9 M36
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- PEARSON, H. S. Never another dust bowl. Rural New-Yorker 101(5531): 342, 344, illus. June 13, 1942. 6 R88

SABINE RIVER-CYPRESS CREEK SOIL CONSERVATION DISTRICT. BOARD OF SUPERVISORS. Soil conservation District program for Sabine river. Cypress creek Soil conservation district no. 417 Texas. 32 pp. Gladewater, Tex., 1941. 56.7 Sal

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UFER, W. S., TAYLOR, E. A., and HILDEBRAND, W. H. The Sullivan Sahara. U. S. Soil Conserv. Serv. Soil Conserv. 8(1): 20-22., July 1942. 1.6 S
How "the present generation of Sullivan Township [Michigan] inhabitants are doing their best to correct the mistakes of the past, and prevent recurrence of land abuse in the future."

U. S. SOIL CONSERVATION SERVICE. Teamwork to save soil and increase production. U. S. Dept. Agr. Misc. Pub. 486, 64 pp., illus. Washington, 1942. 1Ag 84M

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WAGER, P. W. The conservation of resources. In American society and the changing world, by C. H. Pegg and L. M. Brooks [and others], pp. 345-366. New York, F. S. Crofts & co., 1942. Suggested readings, p. 366. 280 Am3

A general survey of conservation of natural resources in the United States.

SEE ALSO Erosion control.

COTTON - CARDING

HELLIWELL, E. H. Card-room maintenance. Wartime conditions call for extra care in inspection, lubrication, and cleaning. Textile World 92(8): 68. Aug. 1942. To be continued. 304.8 T315

THIRTY setting points and their adjustments in the Saco-Lowell revolving flat card. Textile Bul. 62(12): 20-22. Aug. 15, 1942. 304.8 So82

COTTON - COMBER WASTE

PREVENTING comber waste from going onto floor. Method used to overcome trouble of waste continually crowding out of container--operation of aspirator and cause of noil going onto floor--second condensing roll makes possible efficient packing of waste. Amer. Wool and Cotton Rptr. 56(33): 13. Aug. 13, 1942. 304.8 W88

COTTON - DRYING

RUSCA, RALPH A., and GERDES, FRANCIS L. Effects of artificially drying seed cotton on certain quality elements of cottonseed in storage. U. S. Dept. Agr. Cir. 651, 18 pp. Washington, D. C., 1942. Literature cited, pp. 17-18. 1 Ag84C

Results of a two-year study in which 23 cottons were used, "indicate that with green, damp, or wet seed cottons, the process of artificially drying before ginning did not cause an increase in the rate of deterioration of the seed in storage; that in fact, it caused retardation of the formation of free fatty acids. The higher the drying temperature used, the less was the free fatty acid content of the seed at the end of the 90-day storage period."

COTTON - MACHINERY

- BURGES, AUSTIN E. Has the picker for cotton arrived? Prog. Farmer [Tex. ed.] 57(8): 9. Aug. 1942. 6 T311
Reports the progress, and describes the operation, of the International Harvester Company's cotton picker which has reached the practical stage.

COTTON GINS AND GINNING

- CALLAWAY, R. P. Organization and operation of New Mexico cooperative cotton gin associations. N. Mex. Agr. Expt. Sta. Bul. 293, 35 pp. State College, 1942. 100 N465
PAULSON, W. E. Cost and profit of ginning cotton in Texas analyzed. Cotton Trade Jour. 22(35): 7. Aug. 29, 1942. 72.8 C8214
SCHIFFMAN, EDWARD G. Stripping "unneeded gins" for war. U. S. Farm Credit Admin. News for Farmer Coop. 9(3): 19-20. Aug. 1942. 166.2 N47
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WELCH, J. H. Cooperation wins success for cotton growers. Tex. Citric. and Farming 19(13): 5. July 1942. 80 T31
On the organization in 1934 of the Producers' Gin Association--its financial success, buildings, equipment, officers, and operations.
WIGINGTON, JOHN T. Valuable cotton spinning quality results from improved ginning. High percentage of waste material comes from poor ginning...Short fibers and foreign matters increase cost of fabrics. Cotton Trade Jour. 22(33): 7. Aug. 15, 1942. To be continued. 72.8 C8214

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- OSBORNE, JAMES. Speeding production in the spinning department. Textile Age 6(8): 36, 38, 41-42, 44-45. Aug. 1942. 304.8 T3132
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Issued in cooperation with the Bureau of Plant Industry, and the Agricultural Experiment Station and the Engineering Experiment Station of the Agricultural and Mechanical College of Texas.
Summarizes results of fiber and spinning tests on seven varieties of cotton widely grown in the Mississippi Valley.

COTTON WEAVING

- TIKAKAR, SHRIPAD R. Textile industries in Nepal, Bhutan and Sikkim. Indian Textile Jour. 52(613): 13-15. Oct. 1941. 304.8 In2
Illustrations show the types of looms used in these states on the northern border of India.

CROPS (DRYING)

- ATKINSON, F. E., and STRACHAN, C. C. Home drying of fruits and vegetables. Farmer's Mag. 39(8): 9, 36-37, 43. Aug. 1942. 7 C165
BELT, NEWTON O. Drying of young grasses for feed. Agr. Engin. 23(8): 257-259, 261. Aug. 1942. 58.8 Ag83
FOURNET, ESTELLE. Wartime calls for drying. Prog. Farmer (Carolina-Va. ed.) 57(8): 28. Aug. 1942. 6 P945
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LOUGHEAD, MARY E. Drying and storing fruits and vegetables in the home. Ark. Agr. Col. Ext. Cir. 296, 6 pp. Little Rock, 1942. 275.29 Ar4

ELECTRIC POWER

MURRAY, VERNON M. Grand Coulee and Bonneville power in the national war effort. Jour. Land & Pub. Util. Econ. 18(2): 134-139. May 1942. 282.8 J82

EROSION CONTROL

BORST, HAROLD L., and WOODBURN, RUSSELL. Effect of mulches and surface conditions on the water relations and erosion of muskingum soils.

U. S. Dept. Agr. Tech. Bul. 825, 16 pp. Washington, D. C., 1942.

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HESS, E. Die wirkung des graswuchses in einzugsgebieten von wildbachen. Schweiz. Ztschr. f. Forstw. 93(4/5): 97-101. Apr./May 1942. 99.8 Sch9

The utilization of grass planting in the control of mountain torrents and erosion.

HUFF, WARREN C. Preventing soil losses during fall, winter, and spring.

N. Y. Agr. Col. (Cornell) Ext. Bul. 515 (War Emergency Bul. 32), 4 pp.

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MIDGLEY, A. R., PLATH, C. V., and MAYERNIK, J. J. Erosion on Vermont permanent pastures. Vt. Agr. Expt. Sta. Bul. 483, 15 pp., illus.

Burlington, Mar. 1942. Literature cited, p. 15. 100 V59 no. 483

MURRAY, MARION. Unerosive soybeans. Newly discovered methods of production minimize soil losses. Miss. Univ. College Farmer 36(7): 6, illus. Apr. 1942. 6 M691

PEELE, T. C., and BEALE, O. W. Effect of runoff and erosion of improved aggregation resulting from the stimulation of microbial activity.

Soil.Sci. Soc. Amer. Proc. 6: 176-182. Ann Arbor, Mich., 1941.

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REICHART, M. A. L. Wind erosion in the Pampas of Argentina. U. S.

Soil Conserv. Serv. Soil Conserv. 7(12): 298-300, illus. June 1942.

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ROBERTS, CLARENCE. We face eviction by erosion. Farmer Stockman 55(11): 297, illus. July 1942. 6 Ok45

THORNTHWAITE, C. WARREN, SHARPE, C. F. S., and DOSCH, EARL F. Climate and accelerated erosion in the arid and semi-arid Southwest, with special reference to the Polacca wash drainage basin, Arizona. U. S. Dept. Agr. Tech. Bul. 808, 134 pp. Washington, May 1942. Literature cited, pp. 129-134. 1 Ag84Te

VITON, ALFREDO. Algunos problemas graves de la tierra Argentina. Soc.

Rural Argentina An. 76(3): 225-226, 229-230, 232, 235-242, 245-250.

Mar. 1942. 9 Sol

Some serious problems of Argentine land, including the erosion menace.

SEE ALSO Conservation of resources.

FARM BUILDINGS

CARTER, DEANE G. Gearing farm structures to the war effort. Agr. Engin.

23(8): 253-254. Aug. 1942. 58.8 Ag83

SOME well-planned, economical farm remodeling. Miss. Val. Lumberman
73(31): 29. July 31, 1942. 99.81 M69
WOOLEY, J. C., and RICKETTS, R. L. Plans for buildings and equipment for
beef cattle, sheep, and work stock. Mo. Agr. Col. Ext. Cir. 472,
pp. 29-40. Columbia, 1942. 275.29 M69C

FARM HOUSES

WOOLEY, J. C., and RICKETTS, R. L. Plans for farm houses. Mo. Agr.
Col. Ext. Cir. 475, pp. 49-52. Columbia, 1942. 275.29 M69C

FARM MACHINERY AND EQUIPMENT

BEELE, M. N. New jobs for machines. Capper's Farmer 53(9): 18.
Sept. 1942. 6 M693

Farmers save time and labor and get extra value out of equipment
by adapting it to many tasks it never was intended to perform.

BOSANQUET, CHARLES I. Machinery in Britain's food production campaign.
Agr. Engin. 23(8): 260-261. Aug. 1942. 58.8 Ag83

BRODELL, A. P., and COOPER, M. R. Agriculture in a gasoline age.
U. S. Bur. Agr. Econ. Agr. Situation 26(7): 11-13. July 1942.

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"Machines powered by motor fuel must be kept running if farmers are
to produce the extra food and fiber that will be required by fighting
men around the world this year and next."

CECIL, H. Farmers and machinery. Country Life [London] 91(2371):
1236-1237. June 26, 1942. 80 C83

Stresses need for care of farm machinery and cooperative use of
machinery to save crops in good condition.

CREEK, C. R. Labor saving methods and practices on Massachusetts farms.
Mass. Agr. Expt. Sta. Ann. Rpt. 1941, p. 6. Amherst, 1942. 100 M38H

Harvesting and packing iceberg lettuce, tomatoes, celery.

DAVIDSON, J. BROWNLEE. Method of estimating the minimum farm equipment
requirements for 1943. Agr. Engin. 23(8): 251-252. Aug. 1942.
58.8 Ag83

Any estimate or plan for furnishing American farmer with farm equip-
ment for 1943 must consider four essential groups in relation to our
maximum war effort. These are: (1) armed forces, (2) agricultural
industry, (3) farm equipment industry, and (4) farm equipment distribu-
tion or dealer system with its contribution of service. Farm equipment
needed for 1943 should be specifically related to agricultural production
objectives set for year. At present time these objectives have not
been established. In general it may be expected that they will include:
(1) Increase in volume of certain crops or products. 1942 goals com-
pare with 1941 production varied with different crops or products from
88 per cent for wheat to 255 per cent for peanuts. It is expected that
the 1943 goals will be somewhat higher. (2) Increase in acreage of
certain new crops, more particularly oil and fiber crops.

DUFFEE, F. W. Use combine engine to save tractor. Wis. Agr. and
Farmer 69(16): 4. Aug. 8, 1942. 6 W751

Many combine engines can be mounted on two-wheeled trucks for easy
portability, and make excellent power plants to operate ensilage
cutters, feed grinders and other machines. Heavy combine V-belt makes
an excellent and compact drive.

FARM equipment for rent. Impl. and Tractor 57(18): 12-13, 24. Aug. 29, 1942. 58.8 W41

"New Idea" proposes a basis for establishing universal rental charges.

Table gives cost per hour of using farm machinery.

HARVESTING soybeans. Farm Impl. News 63(17): 18. Aug. 20, 1942. 58.8 F22

Table shows soybean harvesting capacity per season for combines allowing for turning, servicing, and unloading.

HOFF, PAUL R. Adjusting the corn binder. Amer. Agr. 139(17): 448, 449. Aug. 15, 1942. 6 Am3

JENNINGS, B. A., and MILLIER, W. F. Common binder troubles. N. Y. Agr. Col. (Cornell) Ext. Bul. 520 (War Emergency Bul. 34), 4 pp. Ithaca, 1942. 275.29 N48E

MACHINE for mixing manure: Patent. Impl. and Mach. Rev. 68(807): 231-232. July 1, 1942. 58.8 Im72

MANY inventions: No. 5: Ditch cutter. Farmers Weekly [London] 17(2): 25. July 10, 1942. 10 F2226

MILLIER, W. F. Cultivator adjustment. N. Y. Agr. Col. (Cornell) Ext. Bul. 514 (War Emergency Bul. 31), 4 pp. Ithaca, 1942. 275.29 N48E

MILLIGAN, D. A. Wartime utilization of excess power. Impl. and Tractor 57(16): 14-15. Aug. 1, 1942. 58.8 W41

To secure maximum output per unit of labor makes necessary maximum utilization of labor-saving machinery. Tractor should be worked with largest load back of it and it is capable of handling, even though it may be necessary to operate in one lower gear. More work will be performed at lower cost for fuel and with less damage to drawn implements, to crops, and with less total wear on tractors and implements by operating with larger load and slower speed, than by operating with small load and higher speed. Use of combinations of implements, thus performing several operations at one trip over field, will reduce man labor in relation to work performed. Table 1 gives man hours required to raise 140 acres of corn with two-plow tractor.

MORE agricultural engineering developments demonstrated. Impl. and Mach. Rev. 68(807): 222-223. July 1, 1942. 58.8 Im72

Ponting's potato planter; Bobby flax puller; Isaacs' potato planter; Allis-Chalmers' new toolbar.

REDUCING labor in seedbed preparation for corn and soybeans. Iowa State Col. Ext. Serv. Pam. 28, folder. Ames, 1942. 275.29 Io9Pa

TELFORD, C. J. Equipment and methods for harvesting farm woodland products. U. S. Dept. Agr. Farmers' Bul. 1907, 26 pp. Washington, D. C., 1942. 1 Ag84F

TINDALL, CORDELL. Our greatest labor saver. Mo. Ruralist 83(4): 5, 19. Feb. 14, 1942. 6 R8891

VAN ALSTINE, E., and RILEY, H. W. Save labor at haying time. N. Y. Agr. Col. (Cornell) Ext. Bul. 508 (War Emergency Bul. 25), 4 pp. Ithaca, 1942. 275.29 N48E

WILLIAMSON, J. A. Side-delivery mower rake: Easily made and attached. Saves labour when mowing green fodder. Agr. Gaz. N. S. Wales 53(6): 259-260. June 1, 1942. 23 N472

ZINK, FRANK J. Agricultural engineering in the war effort as related to farm equipment. Farm Impl. News 63(16): 28-31. Aug. 6, 1942. 58.8 F221

FARM POWER

DUCK, R. W. Horse-power on the hoof. Rural New Yorker 101(5534): 412-413. July 25, 1942. 6 R88

In discussing the strong economic position and importance of horses and mules for farm motive power the writer takes up acreage requirements, cost considerations, harness hints, breeding benefits, and mare management.

FIRE PROTECTION

FIRE prevention. New England Homestead 115(17): 2. Aug. 22, 1942. 6 N442

Fire prevention, now one of farmer's most important jobs, begins with fire-safe construction on farm. Any new farm buildings being erected to house expanded production facilities should be planned with eye to their fire-resistance. Older structures should be examined and made fire-safe if they are now in dangerously flammable condition.

JONES, S. W. Neighborhood fire fighting units. S. Dak. Col. Ext. Min. Cir. 303, 8 pp. Brookings, 1942. 275.29 So85Mi

WRIGHT, F. B. Fire prevention on farms. N. Y. Agr. Col. (Cornell) Ext. Bul. 509 (War Emergency Bul. 26), 4 pp. Ithaca, 1942. 275.29 N48E

WRIGHT, F. B. How to put out a fire. N. Y. Agr. Col. (Cornell) Ext. Bul. 512 (War Emergency Bul. 29), 4 pp. Ithaca, 1942. 275.29 N48E

FLOORS

HOW to build out rats with concrete floors, foundations and walls. Amer. Builder and Bldg. Agr. 64(8): 60. Aug. 1942. 296.8 Am3

Farm building authorities agree that the best way to control rats is to build them out of buildings in which they normally find food and shelter. New construction should be made ratproof when built. Old buildings can easily be made so at low cost. In general, well-built concrete floors, foundations and walls have proved most effective barriers.

FOODS, FROZEN

APP, FRANK. Quick freezing offers wartime economies. Food Indus. 14(8): 48-50, 108. Aug. 1942. 389.8 F737

"The distribution of vegetables in frozen form requires less labor, less critical materials and less transportation capacity than distribution in cans or as fresh produce. Data showing the savings are taken from the experience of a company that has distributed large quantities under all three systems." The company is Seabrook Farms of New Jersey which produces about 20,000 acres of vegetables and contracts with neighboring farmers for an additional 15,000 acres.

FINNEGAN, W. J. Economic aspects of prefreezing bulk foods before storage. Quick Frozen Foods 4(11-12): 10-12, 29, 41. June, July 1942. 389.8 Q4

Paper, presented at the 29th Spring Meeting of the American Society of Refrigerating Engineers, Skytop, Pa., June 8, 1942, discusses engineering aspects, principally.

NAGUS, ARTHUR. Freezing by farmers. Quick Frozen Foods and the Locker Plant 4(12): 16, 39. July 1942. 389.8 Q4

PLAGGE, H. H., and LOWE, BELLE. Preservation of fruits and vegetables by freezing in refrigerated locker plants. Iowa Agr. Expt. Sta. Bul. P46 (n.s.), pp. 487-528. Ames, 1942. 100 Io9

STITT, MAUD E. Preservation of fruits & vegetables by freezing. S. Dak. Agr. Col. Ext. Leaflet 63, 6 pp. Brookings, 1942. 275.29 So85E

WINTER, J. D. Freezing fruits and vegetables. Minn. Univ. Agr. Ext. Folder 111. St. Paul, 1942. 275.29 M66Ex

WOOLRICH, W. R., and BARTLETT, LUIS H. Quick and flash freezing of foods: Fundamental theories and applications. Mech. Engin. [New York] 64(9): 647-653. Sept. 1942. 291.9 Am3J

HOTBEDS AND COLD FRAMES

BROWN, LYLE. Hotbeds and coldframes. Ala. Polytech. Inst. Ext. Cir. 231, 4 pp. Auburn, 1942. 275.29 A11C

INSULATION

GREENE, VAN RENSSELAER H. Types of low temperature insulations. Quick Frozen Foods and the Locker Plant 4(12): 18-19. July 1942. 389.8 Q4
Board and sheet form. Loose material form. Trade name list of popular low temperature insulating materials.

IRRIGATION

EIER, HAL. F., and SCHOENLEBER, L. H. Farm garden irrigation. Kans. State Col. Agr. Ext. Cir. 158, 32 pp. Manhattan, 1942. 275.29 K12Ex

LAMBRECHT, GEORGE H., and RUDEN, WALTER L. Sugar beet costs and management in irrigated sections of western Nebraska. Nebr. Agr. Col. Ext. Bul. 341, 20 pp. Lincoln, 1942. 275.29 N272

SELBY, H. E. Method of determining feasible irrigation payments. Jour. Farm Econ. 24(3): 637-646. Aug. 1942. 280.8 J822

LUBRICATION

HOFF, PAUL R. Lubrication of farm machinery. N. Y. Agr. Col. (Cornell) Ext. Bul. 551 (War Emergency Bul. 28), 4 pp. Ithaca, 1942. 275.29 N48E

MOLE DRAINAGE

DIRECT tractor mole draining simplified. Impl. and Mach. Rev. 68(807): 229. July 1, 1942. 58.8 Im72

Suckling's direct tractor mole drainer.

LEES, A. B. Trenching with a mole plough. Farmer and Stock-Breeder and Agr. Gaz. 56(2755): 1150. July 28, 1942. 10 F228

Trencher is attachment that can be fitted to nearly any mole drainer. On end of beam behind mole anchorage small open platform has been fitted to carry disc on either side which starts cutting 10 inches wide. From platform, just behind discs but following same line, two wires—five-strand with hemp center—go down to expander which is linked to follow mole. Discs, mole, expander and wires cut trench 10 in. wide at top, tapering down to whatever size of mole and expander is being used.

LAND CLEARING

- JONES, NORMAN C. Alternative motor fuels. Automotive Indus. 87(3): 40-44, 76, 78. Aug. 1, 1942. 291.8 Au82
- TROESCH, MAX. Fuel substitutes for motor vehicles. Engin. Digest 2(2): 45-48. Feb. 1941. 290.8 En391
- Abstract from Schweizerische Bauzeitung, v. 116, no. 21, Nov. 23, 1940, pp. 235-239.

PAINTS AND PAINTING

- BROWNE, FREDERICK L. Classification of house and barn paints as recommended by the United States Department of agriculture. U. S. Dept. Agr. Tech. Bul. 804, 37 pp., illus. Washington, D. C., 1942. Literature cited, pp. 35-36. 1 Ag84Te
- Contribution from Forest Service.

POULTRY HOUSES AND EQUIPMENT

- CHARLES, T. B., and TEPPER, A. E. Summer laying shelter. N. H. Univ. [Agr.] Ext. Cir. 244, 7 pp. Durham, 1942. 275.29 N45C
- HOFF, PAUL R., and HURD, LOUIS M. Home-built labor savers for poultry keepers. N. Y. Agr. Col. (Cornell) Ext. Bul. 504 (War Emergency Bul. 22), 8 pp. Ithaca, 1942. 275.29 N48E
- MONTGOMERY, GEORGE A. Less work with poultry. Capper's Farmer 53(9): 12, 19. Sept. 1942. 6 M693
- POULTRY house labor savers. Amer. Agr. 139(16): 427, 437. Aug. 1, 1942. 6 Am3
- WOOLEY, J. C., and RICKETTS, R. L. Plans for poultry buildings. Mo. Agr. Col. Ext. Cir. 473, pp. 41-44. Columbia, 1942. 275.29 M69C

REFRIGERATOR LOCKERS

- COCHRAN, HENRY L. Freezer lockers help conserve. Ark. Farmer 44(8): 6, 10. Aug. 1942. 6 Ar42

RESERVOIRS

- NOVORO, JOSEPH A. Charts solve multiple-reservoir problem. Engin. News-Rec. 129(9): 300-301. Aug. 27, 1942. 290.8 En34
- Determination of individual flows from three or more reservoirs used for multiple-storage water supply may be obtained graphically by preparing set of charts showing relationship between friction loads in various parts of system. Outlines steps to be followed in preparing such charts, and work necessary to determine individual flows when combined discharge is known.

SILT

- BELL, HUGH STEVENS. Density currents as agents for transporting sediments. Jour. Geog. 50(5): 512-547. July-Aug. 1942. 278.8 J82
- SLATER, C. S., and CARLETON, E. A. Variability of eroded material. Jour. Agr. Res. 65(4): 209-219. Aug. 15, 1942. 1 Ag84J

SOILS

- HAMMOND, HENRY D. New sampler for soft and sandy soils. Engin. News-Rec. 129(9): 308-309. Aug. 27, 1942. 290.8 En34
- Improved device for securing undisturbed samples of soft subsurface material uses inverted orange peel of spring leaves to hold sample. Tool will fit split-barrel sample spoons.

HOUSEL, W. S. Measurement of cohesive soil properties applied to engineering design. Civ. Engin. 12(8): 442-445. Aug. 1942. 290.8 C49

Remarkable correlation between data obtained from laboratory tests and actual behavior of soil foundations has awakened interest in refinement and development of new testing methods and in logical interpretation of their results. Analyzes probable accuracy of shear resistance tests. Practicing engineers and educators alike bear responsibility of consolidating gains made in analysis of foundation problems.

KEEN, B. A. Physical research on problems of soil cultivation. Endeavour 1(2): 52-63, illus. Apr. 1942.

"Dr. Keen's article challenges many traditional ideas about agricultural methods. In particular, he brings evidence to show that contrary to deeply ingrained tradition, crop yields are remarkably insensitive to variations in cultivation; and that the attractive 'capillary tube' theory of movement of soil moisture is entirely untenable."

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JUDKINS, WESLEY P. Controlled storage: More expensive than regular cold storage and requires extreme care. New England Homestead 115(17): 7. Aug. 22, 1942. 6 N442

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- PATTY, RALPH L. Permanent farm storage: Suggestions and plans. S. Dak. Agr. Col. Ext. Min. Cir. 302, pt. II, 8 pp. Brookings, 1942. 275.29 So85Mi
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- Contents: What is the grain storage situation in South Dakota? by W. E. Dittmer; What is the storage situation on your farm and what can you do about it?; Regulations for buying materials needed for farm storage; Temporary grain storage, by Ralph L. Patty; Outside temporary grain bins; Minimum moisture for stored grain, by U. J. Norgaard; Stored grain insects, by George I. Gilbertson.
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SWINE HOUSES AND EQUIPMENT

- THIS HOGHOUSE can be moved easily. Miss. Val. Lumberman 73(33): 12. Aug. 14, 1942. 99.8 M69
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- ILLINGWORTH, J. W. The swelling of textile fibres. Textile Rec. 59(710): 26, 28-29. May 1942. To be continued. 304.8 T311
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Abstract from Werkstatt und Betrieb, v. 73, no. 4, Apr. 1940, pp. 79-80.

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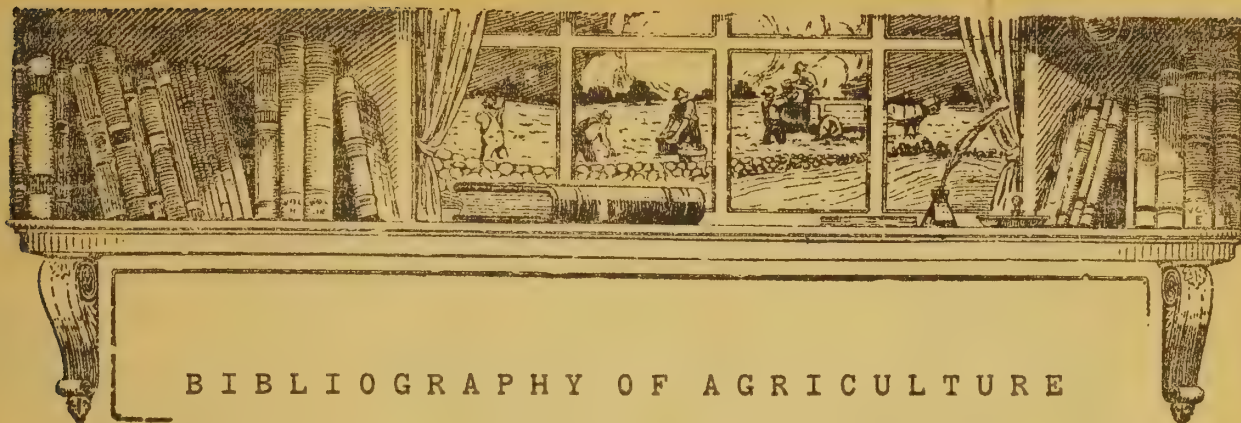
Lesson XI—Surfacing by arc welding offers many profit possibilities for implement and tractor shops. Demonstrates use of welding for building up worn tractor shoes and reclaiming worn plow shares.

Abbreviations used in this publication are those listed in U. S. Department of Agriculture Miscellaneous Publication 337, Abbreviations Used in the Department of Agriculture for Titles of Publications. April 1939.

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SECTION B
AGRICULTURAL ENGINEERING

Vol. 1

October 1942

No. 4

The Bibliography of Agriculture is issued monthly
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AGRICULTURAL ENGINEERING

Vol. 1

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No. 4

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BRIGGS, F. A. What has become of the Dust bowl? Farm and Ranch 61(8):
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CONSERVATION second only to war as vital problem of American people.

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CRAWFORD, G. L. Puerto Rico meets the challenge of war. U. S. Soil Conserv. Serv. Soil Conserv. 8(2): 35-37, illus. Aug. 1942 1.6 So3S

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U. S. Dept. Agr. Misc. Pub. 394, rev., 14 pp. [Washington, D. C.] 1942. 1 Ag84M

Stresses the need for, and advantages of, conservation farming in Minnesota, Wisconsin, Iowa, and Illinois.

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DULEY, F. L., and RUSSEL, J. C. Using crop residues for soil defense. U. S. Dept. Agr. Misc. Pub. 494, 16 pp., illus. Washington, D. C., 1942. 1 Ag84M

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Historical sketch of American farmers in time of war.

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All land will not become or remain permanently as grassland although much of it may, particularly land not suited to tillage. Grassland agriculture is flexible. Where conditions permit, periodic breaking of grassland in preparation for other crops is presumed. Total grass acreage consequently may be expanded or reduced to meet local or national needs. Most difficult thing and most necessary in light of past experiences is proper selection and molding of corrective measures into safe, practical farm program that harmonizes with proper land use and changing market conditions. There are some fundamental principles that have widespread application, but there is no one remedy or combination of remedies that is good everywhere. In final analysis each farm calls for individual diagnosis and treatment.

HUTCHESON, T. B. More oats, barley, pasture mixtures. Prog. Farmer, Car.-Va. Ed. 57(9): 9, illus. Sept. 1942. 6 P945

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IOWA. STATE COLLEGE. EXTENSION SERVICE. Grassed waterways guard the land. Iowa Agr. Ext. Serv. Pam. 33, 6 pp., illus. Ames, Apr. 1942. 275.29 Io9Pa

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- KING, W. B. Cotton fabric for erosion control: Report of experiments on roadside slopes and ditches in Mississippi by District 8, Public roads administration. U. S. Pub. Roads Admin. Pub. Roads 23(5): 94-98. July-Aug.-Sept. 1942. 1 R53P
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- SEARS, PAUL B. Conservation in war time. Ohio Jour. Sci. 42(4): 169-172. July 1942. 410 Ch3
On the need for conserving our natural resources and devoting them to a successful prosecution of the war.
- SOBOLEV, S. S. A certain regularity in the development of the processes of ravine erosion on the European plain of the U.S.S.R. Pedology no. 3, pp. 59-68. 1941. 57.8 P34
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- STUBBLE mulch holds rain. June gully washer is good test. Nebr. Farmer 84(15): 6, illus. July 25, 1942. 6 N27
"Stubble mulch" experimental work at the agronomy farm near Lincoln got its hardest test on June 19 when 2.62 inches of rain fell within a few hours. The work is being carried on by F. L. Duley and J. C. Russel for the soil conservation service and the University of Nebraska College of Agriculture."
- THORFINNSEN, M. A. Contour strip cropping. Minn. Agr. Ext. Folder 108, illus. St. Paul, June 1942. 275.29 M66Ex
- THORFINNSEN, M. A. Wind erosion control. Minn. Univ. Agr. Ext. Bul. 235, 16 pp. St. Paul, 1942. 275.29 M66S
- TO STOP the waste of topsoil. U. S. Ext. Serv. Ext. Serv. Rev. 13(8): 115. Aug. 1942. 1 Ex892Ex
Conservation of soil is important in wartime program of 110 Missouri counties. Knowing this, all agencies got together in holding contour-farming meetings during past spring. Result was estimated increase of 85 per cent in row crops contoured and estimated acreage of 480,000 contoured.
- U. S. SOIL CONSERVATION SERVICE. Wartime farming in the northern Great plains. U. S. Dept. Agr. Misc. Pub. 497, unpagged, illus. Washington, D. C., 1942. 1 Ag84M
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Results of preliminary studies dealing with soil and water losses under different crop and cultural treatments are presented, as such losses reflect changes in fertility brought about by them.

WILLOUGHBY, L. E. Soil conservation districts in Kansas. Kans. Agr. Ext. Cir. 159, 4 pp., illus. Topoka, June 1942. 275.29 K12Ex

COTTON GINS AND GINNING

BENNETT, CHAS. A. Cotton gin fires and prevention. Cotton Ginners' Jour. 13(12): 5. Sept. 1942. 304.8 C824

FOLDA, LAMAR. How to organize, operate, and manage a cooperative cotton gin. Amer. Inst. Coop. Amer. Coop. (1942) 17: 320-330.

Washington, D. C. [1942] 280.29 Am3A

GERDES, FRANCIS L., and BENNETT, CHARLES A. Ginner's role in the war program. Cotton Ginners' Jour. 13(12): 7, 11. Sept. 1942. 304.8 C824

HERRMANN, OMER W. Has cooperative ginning a place in the Southeast? Amer. Inst. Coop. Amer. Coop. (1942) 17: 289-295. Washington, D. C. [1942] 280.29 Am3A

History, advantages, and prospects of cooperative cotton ginning in the Southeast.

PAULSON, W. E., and GABBARD, L. P. Operating costs and financial conditions in Texas. Tex. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 40. College Station, 1942. 100 T31S

Study deals with cooperative gin records for seasons 1932-33 to 1935-36.

PAULSON, W. E. Strength and weakness of the cooperative gin movement. Amer. Inst. Coop. Amer. Coop. (1942) 17: 296-304. Washington, D. C. [1942] 280.29 Am3A

SMITH, BARRON A. Supply operations of cooperative gin associations. Amer. Inst. Coop. Amer. Coop. (1942) 17: 308-315. Washington, D. C. [1942] 280.29 Am3A

COTTON MACHINERY

KILLOUGH, D. T., and others. Breeding cotton for mechanical harvesting. Tex. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 11-12. College Station, 1942. 100 T31S

H. P. Smith, D. L. Jones, and M. H. Byrom, joint authors.

MACHINE harvesting of cotton may become a necessity. Prog. Farmer, Tex. ed. 57(10): 40. Oct. 1942. 6 T311

SMITH, H. P., and others. Mechanical harvesting of cotton. Tex. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 6-7. College Station, 1942. 100 T31S

D. T. Killough, D. L. Jones, and M. H. Byrom, joint authors.

In 1941 Texas Station cotton harvester was used to test harvesting qualities of 23 varieties and strains of cotton at College Station and 17 at Lubbock. Average efficiency for all tests was 89.4 percent at College Station and 98.5 percent at Lubbock. At both locations there was a difference of 1-1/4 grades between hand-picked and machine harvested cotton.

CROPS (DRYING)

BERESFORD, HOBART. Home drying of fruits and vegetables. Rural Electrification Exch. 5(3): 53-55, 71. Third Quarter, 1942. 335.8 R882

CARL, FLORA L., and KNIGHT, LETHA O. Drying fruits and vegetables. Mo. Agr. Col. Ext. Cir. 477, 12 pp. Columbia, 1942. 275.29 M69C

DRYING foods for victory meals. U. S. Dept. Agr. Farmers' Bul. 1918, 14 pp. Washington, D. C., 1942. 1 Ag84C

FOOD dehydration increasing. Calif. Cult. 89(19): 470-471. Sept. 19, 1942. 6 C12

Dehydration of fruits, vegetables, poultry and livestock products is reaching vast proportions. While most of commodities dehydrated at present time are being shipped to our allies, it is probable that dehydration will assume important permanent role in food processing when war is ended.

HOME drying enlists. Pacific Rural Press and Calif. Farmer 144(5): 133. Sept. 5, 1942. 6 P112

Discusses important steps in home dehydration.

HOME drying of fruits and vegetables: bibliography. 2 pp., processed. Washington, D. C., U. S. Dept. of agriculture, Extension service, Dec. 1941. 1.913 N3H75

LOGAN, PAUL P. Dehydrated foods. Methods recommended by the Quartermasters Corps for securing good quality dehydrated foodstuffs. Canning Age 23(10): 514-515, 544. Sept. 1942. 286.83 C165

A table gives dehydration and dehydration ratios for beets, cabbage, carrots, onions, potatoes, turnips, apple nuggets, cranberries, eggs, skim milk and pea or navy bean soup.

MARSHALL, W. R., JR. The drying of foods. War creates tremendous demand for dried foods to save shipping and storage space, prevents spoilage... Describes the many problems involved. Heating, Piping and Air Conditioning 14(9): 527-531. Sept. 1942. 291.8 H352

Importance of food drying has predominated in time of war, present practice in the field having received its development and expansion during the Boer War and World War I. The great need for large supplies of concentrated foods for our armies and those of our allies - and our civilian allies - has created a tremendous demand for dried foods. There is a big field for more engineering attention to food drying problems.

PEILE, RACHEL M. Vegetable drying. Victoria Dept. Agr. Jour. 40(pt. 8): 437-438. Aug. 1942. 23 V66J

PRESERVATION of food by dehydration. Engineering 154(3994): 85. July 31, 1942. 290.8 En322

SMITH, H. P., BYROM, M. H., and ALTSTATT, G. E. Garlic drying. Tex. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 8. College Station, 1942. 100 T31S

Methods of drying and curing garlic to prevent decay during 1941 were: (1) hot air in a drier for 29-1/2 hours at an average temperature of 122° F. for the ingoing air and 114° for the outgoing air, (2) on wire shelves under a galvanized sheet iron roof for 12 days, (3) piled on ground and left exposed in the field for 12 days, (4) spread on wire shelves in barn loft for 12 days, (5) spread on floor of barn loft. There was less shrinkage and decay during storage when garlic was placed on wire shelves either in field shed or in barn.

[SWIFT & COMPANY] Swift & company describes its procedure for dehydrating meat. Natl. Provisioner 107(11): 13, 24. Sept. 12, 1942. 286.85 N21

TARRANT, LYDIA. Home drying of fruits and vegetables. Pa. Farmer 127(5): 101. Sept. 12, 1942. 6 P383

For most farm families, oven or small driers are probably more practical. Prepared food can be spread on trays and placed in oven, or spread on tray of commercial drier placed on top of stove. Best results are obtained when vegetables are precooked and fruits sulfured before drying.

To preserve as much of the original color and flavor of the food to be dried, keep following points in mind: (1) only foods in good condition should be dried; (2) dry foods as quickly as possible; (3) temperature must not be too hot to cook the food nor too low to prevent rapid evaporation of water; (4) drying must be continuous process to prevent growth of organism; (5) air must be kept in motion in order to drive off moisture as it evaporates; (6) foods must be cut in uniform sizes and not spread too thickly; and (7) foods must be stirred frequently.

DEHYDRATION See CROPS (DRYING)

DRAINAGE

SUTTON, JOHN G. Relation of drainage to the victory program of agriculture. Agr. Engin. 23(8): 249-250, 252. Aug. 1942. 58.8 Ag83

ELECTRICITY ON THE FARM

BATEMAN, GEORGE Q. Electric power serves the dairy farm. Farm and Home Sci. 3(3): 5, 10. Sept. 1942. 100 UtlF

During past two years study has been under way at Dairy Experimental Farm to determine amount of power used and cost of operation of number of electrical appliances that may be used by dairy farmer in production and handling of milk. This project has been conducted cooperatively with Utah Power and Light Company.

BLASINGAME, R. U. Cost of electricity. Pa. Farmer 127(5): 114. Sept. 12, 1942. 6 P383

BLAUSER, I. P. Electric power for silo filling. Rural Electrification. Exch. 5(3): 65. Third Quarter, 1942. 335.8 R882

EFFECTIVE farm service program based on study of individual needs. Rural Electrification. Exch. 5(3): 49-51, 60. Third Quarter, 1942. 335.8 R882

ELECTRIC power on Nebraska farms. Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 68-70. Lincoln, 1942. 100 N27

Adaptation of small electric motors to farm use. Automatic water systems. Electrically operated refrigerators for farm use. Heating water for livestock.

ENERGY consumption for various farm jobs: Table. Rural Electrification. Exch. 5(3): 68. Third Quarter, 1942. 335.8 R882

JEERINGS, C. E. Mobile demonstration unit aids farmers in maintenance of electrical equipment. Edison Elect. Inst. Jour. 10(9): 344, 353. Sept. 1942. 335.8 Ed4

New York State College of Agriculture (Cornell Extension Service), working in cooperation with county agents and electric utility companies, has for last two years been carrying electrical knowledge

to farm families by unusually effective method. Using large truck and trailer--the Wattmobile--representatives of College have held demonstrations in almost every county in state, and are now well along on their second tour of farm areas.

REINHART, MARGURETTE. Home service activities in rural areas. Rural Electrification. 5(3): 61-62, 71. Third Quarter, 1942. 335.8 R882

EROSION CONTROL See CONSERVATION OF RESOURCES

FARM MACHINERY AND EQUIPMENT

THE "ALLIS-CHALMERS" silage harvester in operation. Impl. and Mach. Rev. 68(808): 312-313. Aug. 1, 1942. 58.8 Im72

BLASINGAME, R. U. Care of corn pickers. Pa. Farmer 127(6): 135. Sept. 26, 1942. 6 P383

BUGBEE, RALPH J. Some short cuts in silo filling. Elect. on the Farm 15(9): 7-8. Sept. 1942. 335.8 El27

Four men fill 17 x 40 silo while working a 400-acre farm and milking 44 cows. Two men harvest with aid of remodeled corn binder. One fills silo with 5 horsepower motor driven cutter and one is in silo.

DISC scarifier for Kudzu seed. Amer. Soc. Agron. Jour. 34(9): 860-861. Sept. 1942. 4 Am34P

EARLY ground hog thresher. Farm Impl. News 63(19): 23. Sept. 17, 1942. 58.8 F22

FINDING ways to keep 'em rolling. Kans. Farmer 79(4): 3, 12. Feb. 21, 1942. 6 K13

Modern equipment is key to wartime production in face of farm labor shortage. But to keep it rolling, under present handicaps, many farmers are realizing they will have to be better mechanics than ever before by obtaining practical mechanical experience.

FRESH ideas in grass collection. Impl. and Mach. Rev. 68(808): 307. Aug. 1, 1942. 58.8 Im72

Shows "Farmall" F14 tractor pulling a grass mower and what is described as the new "Hosier" elevator or grass pick-up, which is picking up the swath cut on the previous round and delivering it to a low-loading trailer; also drawn by the same tractor. Also tedder set to run in reverse gear with cart sheet attached, so that it is towed behind from wheels of tedder. Two swaths at a time are picked up and deposited on sheet. When latter is full, tines are changed to run "free" and load is drawn to stack.

HARDENBURG, E. V., and SMITH, ORA. Harvesting and storing potatoes. N. Y. Agr. Col. (Cornell) Ext. Bul. 532 (War Emergency Bul. 45), 4 pp. Ithaca, 1942. 275.29 N48E

HENSON, WILL S. New machines give promise of easier beet raising. Sugar Beet Jour. 7(12): 226-228. Sept. 1942. 66.8 Su38

Several of blocking machines of type mentioned have been tested in eastern beet area this spring. Although no unanimity of opinion has been reached, general consensus seems to be that, given suitable operating conditions, machine has promise. Many mechanical blockers have been and are being designed, and this article is published to give reader detailed and interesting account of one of them.

HOMEMADE peanut picker. Clemson Agr. Col. S. C. Ext. Serv. Cir. 220, folder. Clemson, 1942. 275.29 So8E

LEHMANN, E. W., and BATEMAN, H. P. Improving efficiency of farm labor to meet wartime demands. Agr. Engin. 23(9): 277-280. Sept. 1942. 58.8 Ag83

Present labor, power, and machinery situation can best be summarized by saying it seems evident that in some areas there will be a shortage of labor, in others a shortage of power, and in still others a shortage of machines.

Real problem that is nationwide and deserves great deal of study is that of ineffective use of labor because of small farms, small fields, rough topography, inadequate machines; or it may be that the entire program of production has been developed with plentiful supply of cheap labor which is not now available.

LIMA bean harvester. Pa. Farmer 127(6): 134. Sept. 26, 1942.

6 P383

LONG, MARY E. Wartime distribution of agricultural machinery in the United Kingdom. U. S. Off. Foreign Agr. Relations. Foreign Agr. 6(9): 326-328, processed. Sept. 1942. 1.9 Ec7For

MAKING hay the new chopper way. Mont. Farmer 30(2): 5. Sept. 15, 1942. 6 M764

MECHANICAL equipment needed for the eradication of bindweed. Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 70. Lincoln, 1942. 100 N27

MECHANICAL equipment, power, and labor required in Nebraska for the production of corn. Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 73. Lincoln, 1942. 100 N27

MILLIGAN, D. A. Practical methods of increasing farm production. Farm Impl. News 63(18): 36-37. Sept. 3, 1942. 58.8 F23

Regardless of anticipated better prices and greater demands, the successful farmer, the efficient farmer, will still try and lower his cost of production. Lowering his production cost will increase his profit margin; it will place him in position to pay taxes, reduce any outstanding indebtedness, and put himself in liquid position. Five things can be done to increase farm production with reduced man power: 1. Reduce man labor per crop unit. 2. Reduce number of operations performed in the producing of crops. 3. Work more hours per day, more days per week, more days per month, and more days per year. 4. Have well organized and diversified system of crop and livestock production with distributed labor requirement. 5. Raise maximum yields.

NEW ENSILAGE cutter-blower has ingenious molasses feed. Impl. and Mach. Rev. 68(808): 304-305. Aug. 1, 1942. 58.8 Im72

NEW SPRAYER secures 100 per cent. pest mortality. Impl. and Mach. Rev. 68(808): 306. Aug. 1, 1942. 58.8 Im72

RATIONALISING our farm mechanisation! How production will be assisted and application become more instructed. Impl. and Mach. Rev. 68(808): 301-303. Aug. 1, 1942. 58.8 Im72

ROEHL, L. M. Handy home-made ensilage cart. Amer. Agr. 139(17): 450, 458. Aug. 15, 1942. 6 Am3

STEAM engines haul plow on mile-long cable. Pop. Mechanics Mag. 78(4): 62. Oct. 1942. 291.8 P81

Gang plows that cut 16 furrows are crossing and recrossing fields of hungry Europe, drawn back and forth by cables wound on windlass of twin steam engines stationed at opposite ends of field mile wide. Invented in England, this steam plow is now in use in Germany, where

its 230-horsepower engine burning coal or wood is economical in oil-poor land. Reversible plow frame is triangular; reaching end of field, 16 blades which have just finished their furrows tilt upward and 16 others facing opposite direction dig into ground for return trip. Two steam engines, which somewhat resemble our familiar steam road rollers, move along two edges of field as plowing progresses.

TURNER, C. N. Machines must work efficiently. U. S. Ext. Serv. Ext. Serv. Rev. 13(8): 123. Aug. 1942. 1 Ex892Ex

WIRT, F. A. Gearing farm machinery to the war effort. Agr. Engin. 23(9): 285-286. Sept. 1942. 58.8 Ag83

Responsibility of agricultural engineers under present conditions is threefold: (1) To assist in bringing about best possible use of such new machines as manufacturers may be permitted to build, (2) to promote efficient use of old machines through proper servicing and stocking of repair parts by implement dealers, and (3) to make their knowledge known to men in authority on all matters pertaining to application of engineering in agriculture.

FARM STRUCTURES

CAN LIVESTOCK pay rent? Amer. Lumberman, no. 3235, pp. 16-19. July 25, 1942. 99.81 Am3

Gives result of survey conducted by American Lumberman to ascertain amount to be spent for livestock buildings.

CARTER, DEANE G., and FOSTER, W. A. Farm buildings. Ed. 3, 404 pp. N. Y., John Wiley & sons, inc., 1941. 296 F81

CLELAND, S. B. Straw sheds. Minn. Univ. Agr. Ext. Bul. 227, 8 pp. St. Paul, 1942. 275.29 M66S

WALTON, JAMES. Timberwork of English barn buildings. Country Life [London] 91(2370): 1180-1181. June 19, 1942. 80 C83

WOOLEY, J. C., and RAGSDALE, A. C. Dairy farm building plans. Mo. Agr. Col. Ext. Cir. 470, 16 pp. Columbia, 1942. 275.29 M69C

FENCES

DALZIEL, CHARLES F. Improved single-impulse electric fence. Agr. Engin. 23(9): 287-290. Sept. 1942. 58.8 Ag83

Improved single-impulse electric fence is result of investigations made at University of California to develop safe and effective fence controller. Although improved design is not covered specifically in various safety codes, it is believed that it will be found to conform to intent of present regulations.

SMITH, H. P., and BYROM, M. H. Atmospheric exposure of wire and fencing. Tex. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 7-8. College Station, 1942. 100 T31S

Some of light zinc-coated samples show some yellowing and rust-like specks while heavy zinc-coated samples show only effects of weathering by becoming grayish in appearance. Corrosion resistant steels show more rust than last year. Details of condition of all samples appear in "Wire Test Report" published by the American Society for Testing Materials, Philadelphia, Pennsylvania.

FERTILIZER PLACEMENT

SAYRE, CHARLES B. Easier, more effective method of applying fertilizers. Amer. Fert. 97(6): 5-7, 22, 24, 26. Sept. 12, 1942. 57.8 Am3

Plowing under fertilizers, like plowing under manure, appears to have distinct advantages, particularly in saving labor--attachments described.

SMITH, H. P., and BYROM, M. H. Efficiency in distribution and placement of cottonseed and fertilizer. Tex. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 7. College Station, 1942. 100 T31S

Experiments in this project were conducted at Main Station Farm and at Brazos River Field Laboratory.

FIRE PROTECTION

DAVIS, GRACE, and DAVIS, KNICKERBACKER. Rural fire alarm. Country Gent. 112(10): 12-13, 51-52. Oct. 1942. 6 C833

With farm and rural fire losses averaging \$600,000 daily, Secretary Wickard is undertaking program to help rural people identify and eliminate fire hazards. He hopes to gather about ten farmers in each community into fire companies trained to combat increased hazards of wartime. Plan similar to this has been operating for years with conspicuous success in Lancaster County, Pennsylvania.

DON'T feed a fire! Save food and materials needed to win the war.

Ga. Agr. Col. Ext. Serv. Cir. 299, folder. Athens, 1942. 275.29 G29B

IRRIGATION

BROWNING, C. R. Irrigation conduit gunited on simple movable forms. Civ. Engin. 12(5): 272-273. May 1942. 290.8 C49

GUNNISON, S. V. Make your irrigation really pay. Planned benefits from effective watering. Fla. Grower 50(9): 8. Sept. 1942. 80 F6622

Discusses briefly irrigation systems for use on Florida's rolling and sandy soils.

LEEPER, G. W. Restoring Australia's parched lands. A comment. Austral. Quart. 14(2): 50-52. June 1942. 280.8 Au7

Critizes an article by J. J. C. Bradfield in the March issue, proposing to build huge reservoirs in the interior of the country to irrigate the land and improve the climate.

LOWDERMILK, W. C., and WICKES, D. R. Ancient irrigation in China brought up to date. Sci. Monthly 55(3): 209-225, illus. Sept. 1942. 470 Sci23

NAJERA, ENRIQUE G., and MALDONADO, RAFAEL. Problemas de la región lagunera. Méx. Agr. 3(4): 481-488. Oct.-Dec. 1941. 280.8 M57

Discusses the difficulties in the irrigation of La Laguna because of the lack of dependability of the river Nazas and tells of the work that has been done including the construction of a dam.

OVERHEAD irrigation of bananas in Honduras. Trop. Agr. [Trinidad] 19: 62. 1942. 26 T754

"A permanent installation is briefly described. One revolving nozzle 25 feet above ground throws a stream of water about 205 feet long and irrigates 3.3 acres per revolution at the rate of 1/3 inch per hour."

Abs. in Imp. Bur. Soil Sci. Soils and Fert. 5(4): 119. 1942. 241 Im7P

THOMAS, HARRY. Drainage and irrigation turn valley into region of rich farms. Rural Electrification Exchange 5(3): 56. Third Quarter, 1942. 335.8 R882

VARGAS, J. OCTAVIO. La irrigación ejidal. México Agr. 3(3): 333-341. July-Sept. 1941. 280.8 M57

Discusses the work of irrigation in Mexico and makes definite suggestions for its expansion especially in the case of communal and small farms.

MILK COOLING

METHODS of cooling milk on the farm and their effect on quality. Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 70. Lincoln, 1942. 100 M27

MILK HOUSES

BUILDING for better milk. Wis. Agr. and Farmer 69(18): 1, 5, 31. Sept. 5, 1942. 6 W751

Discusses value and construction of milk houses, and cooling tanks.

HUBER, M. G. Maine milk house. Hoard's Dairyman 87(17): 472. Sept. 10, 1942. 44.8 H65

MILK houses needed. Amer. Builder and Bldg. Age 64(9): 58, 60. Sept. 1942. 296.8 Am3

How to plan and build milk houses.

WARD, WALTER G., CAULFIELD, W. J., and LARSON, TOM. Milk houses for Kansas. Kans. State Col. Agr. Ext. Bul. 74, rev., 20 pp. Manhattan, 1942. 275.29 K13E

MOTORS, ELECTRIC

CALHOUN, J. L. Portable motor for Georgia farms. Ga. Agr. Col. Ext. Serv. Bul. 467, 16 pp. Athens, 1942. 275.29 G29B

VEA, O. F. Electric motors--their selection and maintenance. Heating and Ventilating 39(8): 36-42. Aug. 1942. 291.8 H35

POULTRY HOUSES AND EQUIPMENT

ARE YOU building a poultry house? Wis. Agr. and Farmer 69(18): 24. Sept. 5, 1942. 6 W751

DOBBIN makes room for biddy. Wallaces' Farmer and Iowa Homestead 69(19): 543-544. Sept. 19, 1942. 6 W15

Discusses remodeling of barns into poultry houses.

KENNARD, D. C., and CHAMBERLIN, V. D. Time- and labor-saving equipment for the laying house. Ohio Agr. Expt. Sta. Spec. Cir. 51 (1st rev.), 16 pp. Wooster, 1942. 100 Ch3S

MARTIN, KEN. Slot system of ventilation. Everybody's Poultry Mag. 47(8): 4. Sept. 1942. 47.8 F213P

When used in insulated houses, and where ventilation is carefully regulated, slot system means dry litter, comfortable house, fewer respiratory troubles, reduced mortality, better use of feed, more eggs.

QUICK FREEZING

ZAROTSCHENZEEF, M. T. Quick freezing lamb in Tierra del Fuego. Natl. Provisioner 107(11): 18-19. Sept. 12, 1942. 286.85 N21

Describes briefly the quick freezing of partly boned lamb cuts in Argentina for shipment abroad.

REFRIGERATOR LOCKERS

CARVER, WAYNE. Frozen food locker industry. Refrig. Engin. 44(3): 147-150, 202, 204. Sept. 1942. 296.9 Am32J

In this analysis of development of locker industry, the author stresses its importance in present wartime period. In the latter part of article he points out savings in critical materials that can be made if quantity of frozen foods is increased, and demonstrates that if farmers are permitted to continue their use of lockers, actual transportation savings will be effected.

SEATON, H. L. Locker cold storage development. Amer. Inst. Refrig. Proc., May 12 and 13, 1941, pp. 63-69. Chicago, Ill., 1941. 295.9 Am3

History and present status; typical locker plant lay-out; services provided and sources of revenue; research and educational activities.

WARRINGTON, S. T. Making the locker and curing plant more efficient. Amer. Inst. Coop. (1942) 17: 465-474. Washington, D. C. [1942] 280.29 Am3A

WRIGHT, R. E. Fresh foods in January. New England Homestead 115(18): 3, 8. Sept. 5, 1942. 6 N442

Approximately 5,000 locker plants have already been built in United States at average cost of \$10,000 each. On each plant, annual rent of \$3,000 is anticipated plus various processing and servicing charges. Only about 15% of business is wholly independent, 25% is run in connection with dairies and creameries, 12% with cold storage, 15% with farm co-operatives and meat markets, while remaining 18% is tied in with miscellaneous enterprises.

REFRIGERATORS

KNOWLES, ELAINE. Wise use and care of an electric refrigerator. N. Y. State Col. Home Econ. (Cornell Univ.) Bul. 521 (War Emergency Bul. 35), 12 pp. Ithaca, 1942. 275.29 N48E

SOILS

BELCHER, D. J. Use of aerial photographs in war-time soils engineering. Roads and Streets 85(7): 35-37, illus. July 1942. 288.8 R536

"The principles contained in this article are fundamental and not specifically limited to war-time usage. However airports and other military uses have been emphasized rather than ordinary highway work. The need for speed and the ever-increasing use of airphotos gives the military aspect a special significance at this time."

BORDEN, R. J. Are there possibilities in subsoil fertilization? Hawaiian Planters' Rec. 46(2): 59-63. Second Quarter, 1942. 25 H311

"Granted that data which have been recorded herein need liberal interpretation, because responses measured on both surface soils and subsoils were not actually obtained in situ, and with no attempt to minimize effects from aeration which necessarily accompany all soil sampling, preparation and potting, yet we have shown that this aeration was in itself insufficient to make subsoils produce satisfactory yields.

"On the other hand, well-fertilized subsoils have been made to produce yields which were not significantly different from similarly fertilized surface soils.

"So idea still persists that since few of our cane land soils really

lack for air in their second-foot root zone, failure of masses of roots to extend therein is chiefly due to low available nutrient supply. If this condition can be corrected and subsoil nutrient supply can be more nearly equalized with that of surface soil, desirable objective should be easier to reach."

COILE, T. S. Some physical properties of the B horizons of Piedmont soils. Soil Sci. 54(2): 101-103, illus. Aug. 1942. 56.8 So3

HAHN, B. E., OLSON, F. R., and ROBERTS, J. L. Influence of potassium chloride on nitrification in Bedford silt loam. Soil Sci. 54(2): 113-121, illus. Aug. 1942. References, pp. 120-121. 56.8 So3

MORGAN, M. F., JACOBSON, H. G. M., and STREET, O. E. The neutralization of acid-forming nitrogenous fertilizers in relation to nitrogen availability and soil bases. Soil Sci. 54(2): 127-143, illus. Aug. 1942. 56.8 So3

"A report of Windsor lysimeter Series D."

OSBORN, R. F. Green-manuring gives richer soils. Essential to consider when ploughing-in crops to add humus, provide nitrogen and retain moisture. Farmer's Weekly [Bloemfontein] 68: 660-661, illus. June 3, 1942. 24 F225

READ, H. A. Eucalyptus saligna and soil reclamation. So. Afr. Forestry Assoc. Jour. 1941, no. 7, pp. 48-52, illus. Apr./Oct. 1941. 99.9 So82

SMITH, G. D. Illinois loess, variations in its properties and distribution. A pedologic interpretation. Ill. Agr. Expt. Sta. Bul. 490, 134 pp., illus. Urbana, 1942. Literature cited, pp. 183-184. 100 Il6S

"This bulletin is a progress report on a study of the loess in Illinois as a parent material from which soils have been formed. Primary attention has been given to the distribution of the loess deposits and to the relation between the character of these deposits and the distance from their source."

STORAGE OF FARM PRODUCE

ARE THOSE vegetables safe? Successful Farming 40(10): 19, 96-97. Oct. 1942. 6 Su12

BATEMAN, H. P., CARTER, D. G., and SHAWL, R. I. Soybeans; harvesting; storing. Ill. Agr. Col. Ext. Cir. 529, 6 pp. Urbana, 1942. 100 Il6S

COMIN, DONALD. Refrigerated farm apple storages. Ohio Agr. Expt. Sta. Bul. 632, 68 pp. Wooster, 1942. 100 Oh35

GRAIN is being stored one way or another. Idaho Farmer 60(19): 442. Sept. 10, 1942. 6 G282

HOME storage of foods (exclusive of freezing storage): bibliography. 3 pp., processed. Washington, D. C., U. S. Dept. of agriculture, Extension service, 1941. 1.913 N3H751

MANTHEY, E. W. Reinforced tile grain storage bins. Brick and Clay Rec. 101(3): 21-22. Sept. 1942. 299.8 B762

Speed tile with waterproofed mortar makes moisture-proof grain storage bins at a cost of 11 cents to 14 cents per bushel capacity of the bins.

MAY STILL build grain storage. Oreg. Farmer 65(20): 472. Sept. 24, 1942. 6 Or32

Plans for grain bin described.

METHODS and equipment for curing and preserving perishable farm products.
Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 72. Lincoln, 1942.
100 N27

PIENIAZEK, STEPHEN A. External factors affecting water loss from
apples in cold storage. Refrig. Engin. 44(3): 171-173. Sept. 1942.
295.9 Am32J

SCHAFFHAUSEN, J. F. Farm engineer. Country Gent. 112(10): 28. Oct.
1942. 6 C833

Discusses storage of farm produce.

SHIER, G. R., and BARDEN, R. D. Every bean needs a bin. Ohio Farmer
190(5): 5. Sept. 5, 1942. 6 Oh3

SIGMAN, CARL T., and WARD, WILLIAM, JR. Winter storage for your
Victory garden. Pop. Sci. Monthly 141(4): HW308-HW310. Oct. 1942.
470 P81

STORING vegetables for winter use. Maine Agr. Col. Ext. Bul. 167,
folder. Orono, 1942. 275.29 M281C

STORING vegetables successfully. N. Dak. Agr. Col. Ext. Leaflet 66,
folder. Brookings, 1942. 275.29 N812L

TOOLE, EBEN H. Storing vegetable seed. Seed World 52(5): 8-9, 39.
Sept. 4, 1942. 61.8 Se52

WILLIAMS, MARY D. Maybe the cave man had the right idea! Proper
storage place for many vegetables is under the ground. Ind. Farmers'
Guide 98(18): 9. Sept. 15, 1942. 6 In2

WORK, PAUL. Consider the squirrel. Store away some vegetables for
winter. Amer. Agr. 139(19): 8, 15. Sept. 12, 1942. 6 Am3

SWINE HOUSES AND EQUIPMENT

HOLLOW concrete blocks are ideal for piggeries. New Zeal. Farmer
63(11): 15. July 30, 1942. 23 B474

LACEY, JIM. Self-fed hogs save time and labor. Wis. Agr. and Farmer
69(19): 10. Sept. 19, 1942. 6 W751

PIG BROODERS. Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 71-72.
Lincoln, 1942. 100 N27

PIGS like a dry bedroom. Wallaces' Farmer and Iowa Homestead 67(18):
485, 499. Sept. 5, 1942. 6 W15

RAISE your hogs on concrete, up profits. Ky. Farmers Home Jour. 78(8):
7. Sept. 1942. 6 F2237

New confinement method cuts costs; paved floors inexpensive, easily
built.

ZAVORAL, H. G., and MORRIS, W. E. Hog yard equipment. Minn. Univ.
Agr. Ext. Bul. 236, 8 pp. St. Paul, 1942. 275.29 M66S

TERRACING

SPRINGER, DALE E. Terrace construction by plowing. Agr. Engin. 23(9):
284, 286. Sept. 1942. 58.8 Ag83

Advantages of plow-constructed terraces are: (1) Equipment required
is available on most average-sized farms in corn belt; (2) tractor
and plow are generally in good condition, and there is no extra work
for farmer to get ready; (3) terraces are constructed more economically
with plow than with some of conventional terracing machines; (4) one
man can do job; (5) farmer uses same methods for maintenance as for
construction; (6) farmers who practice contour farming can easily
build terraces without special assistance.

Cautions to be exercised are: (1) Do not start terrace construction until terrace system has been designed and satisfactory terrace outlets are established; (2) do not start on too many terraces at one time; (3) build top terrace first and work downhill, taking each terrace in succession; (4) do not give up with plow method until several replowings of once-plowed soil have been made.

TRACTORS

BEWARE of tractor fuel blends. Farm Impl. News 63(18): 44. Sept. 3, 1942. 58.8 F22

Summarizing drawbacks it is evident that farmer is not accomplishing his purpose. While his cost per gallon of that tractor fuel may be low, his cost per acre will be high due to: 1. High fuel consumption per acre, 2. High motor oil consumption per day, 3. Lack of smooth operation, 4. Possible knocking and resulting damage to engine, 5. Smoke production, 6. More rapid sludge formation.

CABRERA G., RAIMUNDO. Importante medida de fomento agrícola.

Campesino [Santiago] 74(5): 251, 306. May 1942. 9.3 Sol2

Describes the advantages of the recent establishment of a service of tractors and other types of agricultural machinery by the Chilean Corporación de Fomento.

COST of tractor operation. Ky. Agr. Expt. Sta. Ann. Rpt. 1941, p. 36. Lexington, 1941. 100 K41

Costs incurred in operating 43 tractors on farms in Union and Henderson Counties in 1940 were compared this year with costs of operating 36 tractors in Christian and Todd Counties in 1930. Operation costs had declined during ten years. Depreciation was still major item of cost, followed closely by fuel and oil expense. Tractor cost per acre of crops or per day of use was relatively high on some of these farms because tractor was not used enough. When tractor is used only 25 or 30 days a year costs for fuel and oil are no higher per day or per acre than when it is used 100 days or more, but costs for depreciation and interest per unit of use are considerably higher.

COX, R. W. Cost of automobile, truck, and tractor power on Minnesota farms. Minn. Univ. Agr. Ext. Div. Farm Business Notes, no. 235, pp. 2-3. University Farm, St. Paul, July 1942. 275.29 M663

JOHNSTON, P. E. What it costs to operate a tractor. Agr. Leaders' Digest 23(7): 22, 24. Sept. 1942. 275 Am3

Average cost an hour for operating tractors in central Illinois was 55 cents for two-plow tractors, 66 cents for three-plow tractors, 77 cents for crawler-type tractors and 97 cents for four-plow tractors, on basis of records of the University of Illinois College of Agriculture.

TRACTOR fuel and cooling system capacities. Farm Impl. News 63(18): 22, table. Sept. 3, 1942. 58.8 F22

TRACTOR testing. Nebr. Agr. Expt. Sta. Ann. Rpt. (1941) 55: 68. Lincoln, 1942. 100 N27

WATER SUPPLY

GIVAN, C. V. Irrigation water supply system capacities. Agr. Engin. 23(9): 281-283. Sept. 1942. 58.8 Ag83

This graphical method of accounting for changes in soil-moisture

regimen has not been applied to other problems where other rates of logs and soil-moisture capacity are assumed to exist. However, there seems to be no reason why method cannot be used to solve even more complicated problems of this type. In fact, method might be useful in determining rates at which any material should be supplied from one or more sources for storage in series of places where it is required that stored material be available at all times during which it is to be withdrawn from each storage place at known rates of withdrawal.

MARSH, RALPH E. Reports on the surface water supply of Louisiana to September 30, 1938. La. Geol. Survey. Geol. Bul. 16, 196 pp. New Orleans, 1939. 406 L932

SEARIGHT, WALTER V., and MELEEN, ELMER E. Rural water supplies in South Dakota, Roberts county. S. Dak. Agr. Col. Ext. Spec. Ext. Cir. 47, 18 pp. Brookings, 1940. 275.29 So85Sp

WEED CONTROL

KIRCHER, W. H. War-time weed fighting. Farmer 60(16): 5. Aug. 8, 1942. 6 F2211

Discusses mechanical cultivation for weed control.

WELDING

MADISON, ARTHUR. Learning to arc weld. Impl. and Tractor 57(19): 32, 34, 36, 38. Sept. 12, 1942. 58.8 Im73
Lesson XII--Arc weld surfacing with various electrodes.

WINDMILLS

WHO OWNS the wind? Northwest. Miller 211(13): 18-19, 45. Sept. 23, 1942. 298.8 N81

Abridged from a historical compilation first published by the Northwestern Miller in 1907. Deals with the theory and practice of windmill operation.

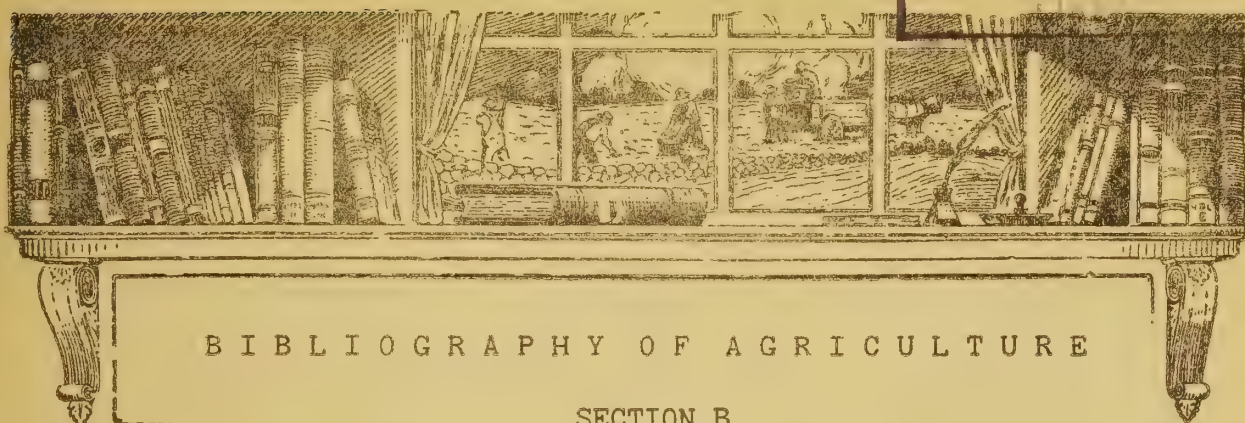
C O R R E C T I O N

In the September 1942 issue of Agricultural Engineering, p. B-41, the first heading should read "Motor Fuels," and not "Land Clearing."

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SECTION B
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Vol. 1

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No. 5

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Literature.

Section D, Plant Science. Supersedes Plant Science
Literature.

Section E, Forestry. Continues Forestry Current
Literature, which ceased publication with v. 7,
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BIBLIOGRAPHY OF AGRICULTURE

SECTION B
AGRICULTURAL ENGINEERING

Vol. 1

November 1942

No. 5

ACCIDENTS

- HUDGINS, HOULDER. For real discomfort--"There's no place like home."
Pop. Mechanics Mag. 78(5): 72-76, 166-167. Nov. 1942. 291.8 P81
Discussion of home accidents.
- LEHMANN, E. W. Accidents can be prevented. Elect. on the Farm 15(10):
13, 16. Oct. 1942. 335.8 E127
About one-fourth, or 4,500 of workers killed on jobs and little
over one-third of workers killed off jobs were farm workers. There
was larger per cent of farm workers accidentally killed in 1941 than
were killed in any other industry. While accidental falls result-
ing in deaths and injury top list among all accidents on farms
throughout year, number of accidents involving horses is close
second, followed by tractors, hay tools, and combines. Of 3,598
farm accidents reported in newspapers in Illinois in 1941, 456 in-
volved horses resulting in 37 deaths. During same year there were
342 accidents involving use of tractor resulting in 20 deaths.
It is evident that, in operating farm, care must be used in the
handling of livestock, as well as machinery.
- U. S. BUREAU OF AGRICULTURAL ECONOMICS. The prevention of accidents
on farms and in homes. 49 pp., processed. Washington, D. C.,
Sept. 1942. 1.941 F6P92
"An analysis of farm-and-home accident data collected from all
available sources and representing practically all types and condi-
tions of agriculture in the country."

BARNs

- ANDERSON, JOHN M. Remodeled barns help meet wartime needs. Agr.
Engin. 23(10): 326-327. Oct. 1942. 58.8 Ag83
- BARN remodeling. Hoard's Dairyman 87(20): 563. Oct. 25, 1942.
44.8 H65
- KREUTZER, FRED J. Safe 'n sane handling and housing of the bull with
building plans that will aid you. Jersey Bul. 61(33): 1399, 1474-
1475. Oct. 20, 1942. 43.8 J48
Describes latest developments in barns.

BUILDING MATERIALS

- PATTY, R. L. Soil admixtures for earth walls. Agr. Engin. 23(9):
291-294. Sept. 1942. 58.8 Ag83
Admixtures of sand, cinders, Portland cement, Tannic acid, common
salt, fiber, asphalt emulsion.

CONSERVATION OF RESOURCES

ARBOUR, MARJORIE B. Louisiana land goes to war. Prog. Farmer, Miss.-Ark.-La. Ed. 57(10): 10. Oct. 1942. 6 So81

Tells how agencies of the Federal Government have been working to conserve and build Louisiana soil so that that state might produce her quota of food and feed to help win the war. The growing of erosion-resistant and soil-improvement crops, such as kudzu and Lespedeza sericea is one of the outstanding aspects of this program. Information from the annual report of the State Soil Conservation Committee gives the high points of the all-over state conservation picture.

BENNETT, HUGH H., and PRYOR, WILLIAM C. This land we defend. 107 pp. New York & Toronto, Longmans, Green and co., 1942. 56.7 B43T

"Erosion is still wasting our land faster than we have thus far been able to apply control. We have gained some ground in our fight but we started late, and every day's delay makes the job more difficult and more costly. We dare not lose more time. We must overtake erosion in the next 15 years or run the risk of never overtaking it. Only by going 'all out' for conservation of all our natural resources--and foremost our soil, can we keep America virile and free."

BROMFIELD, LOUIS. This country of ours. The Land 2(2): 154-156. May-June-July 1942. 279.8 L22

Address at Friends of the Land meeting, July 23-25, 1942.

A statement of appreciation of the value of our soil and natural resources; and a condemnation of our false standard of values which have set exploitation of resources above their conservation.

CALVIN, ROSS. Goodbye, main street; the history of a gully. The Land 2(2): 121-124. May-June-July 1942. 279.8 L22

History of the destruction of Main Street in Silver City, New Mexico, by flood waters resulting from denuded lands in the drainage basin of the area. Presents a graphic picture of land destruction resulting from land-cover destruction.

[CARR, HARRY L.] Wartime farming on the northern Great Plains. U. S. Dept. Agr. Misc. Pub. 497, 20 pp. [Washington, D. C.] June 1942. 1 Ag84M

Prepared by the U. S. Soil Conservation Service.

Advocates conservation farming, and outlines conservation farming practices in the northern Great Plains. Illustrated with numerous photographs.

COOK, LINDLEY G. Cooperation in conservation. N. J. Farm and Garden 13(10): 6-7. Oct. 1942. 6 G162

Discusses cooperative soil conservation project in New Jersey.

COTHRAN, WALTER S. Beauty that pays. The Land 2(2): 127-130. May-June-July 1942. 279.8 L22

Describes a combined soil-conservation and roadside-beautification project in operation in Floyd County, Georgia.

DAVIS, CHESTER C. Conservation and world security. The Land 2(2): 165-167. May-June-July 1942. 279.8 L22

Speaking at a meeting of Friends of the Land, at St. Louis, Mr. Davis contends that "the nations that are the trustees of natural resources which must feed and clothe the world have the responsibility of so managing them in their relations with the people of

other and perhaps less fortunate nations after the war as to contribute toward permanent security and peace."

HEUBLE, HERBERT H., and REINHOLT, OSCAR H. Waste of wealth. Its causes and costs; its conquest through conservation. 72 pp.

Appleton, Wisconsin, C. C. Nelson pub. co., 1941. 279.12 H37

HILL, H. O. Profits through soil conservation. Assoc. South. Agr. Workers. Proc. (1942) 43: 221-222. 1942. 4 C82

Purpose of paper is to show some of profits that may be obtained by practical application of results of soil conservation research.

KING, W. B. Cotton fabric for erosion control. Report of experiments on roadside slopes and ditches in Mississippi, by District 8, Public roads administration. U. S. Pub. Roads Admin. Pub. Roads 23(5): 94-98. Aug.-Sept. 1942. 1 R53P

KUCINSKI, K. J. Wind tunnel for erosion research. Soil Auger 3(3): 5-6. Sept. 1942. 275.29 M381Sc

Wind tunnel has been constructed at Massachusetts Experiment Station for purpose of conducting research on wind erosion problems. Wind tunnel 32 feet long by 3 feet by 3 feet especially designed for local conditions, has recently been built. A 15-horsepower electric motor drives 4-blade airplane propeller to generate wind velocities as high as 50 miles per hour. Various soils under investigation are placed in work section of tunnel and observations are made through glass doors along the sides of tunnel. Instruments are used to record wind velocities and amounts of erosion. Preliminary trials with tunnel have given interesting results, and it is expected that information finally obtained will help greatly in understanding why certain soils erode more than others, and possibly aid in establishing means for their stabilization.

LOWDERMILK, W. C. Soil erosion and its effect on culture. 33 pp., processed. [Washington, D. C., U. S. Soil conservation service, June 1942] Literature cited, p. 33. 1.96 Ad63

Address before the National Catholic Rural Life Conference, Atchison, Kans., July 1941.

Graphic description of the destructive effects of soil erosion in northern Syria. The author relates his own experiences and observations while making field investigations in the area.

McCORKLE, J. S. Contour furrows on ranches of the Great Plains. Cattleman 29(5): 21, 22, 24, 25, 28, 29, 30, 31, 32. Oct. 1942. 49 C29

MEACHAM, EARL. Defend your nation and its soil. N. C. Agr. Col. Ext. War Ser. Bul. 2, 6 pp. Raleigh, 1942. 275.29 N811W

MUSSER, R. H. A farm-city plan for erosion control. Jour. Land and Pub. Util. Econ. 18(3): 323-327. Aug. 1942. 282.8 J82

Explanation of the work of the Upper Sangamon Valley Association, of east-central Illinois, a joint farm-city organization formed by the farmers of the Upper Sangamon Valley and the city of Decatur, to protect the soils of the Sangamon River watershed.

RENNER, GEORGE T. Conservation of national resources. 228 pp. New York, John Wiley & Sons, inc.; London, Chapman & Hall, ltd. 1942. 279 R29C

SLATTERY, HARRY. From Roosevelt to Roosevelt. The Land 2(2): 171-172. May-June-July 1942. 279.8 L22

Brief statement of the origin, growth, and present world-wide importance of the conservation movement.

UHLAND, R. E. Conservation farming insures larger yields. 20 pp., processed. [Washington, D. C.] U. S. Soil conservation service [1942]. 1.96 R31Cf

Covers studies made in cooperation with the State agricultural experiment stations of Missouri, Iowa, Indiana and Ohio.

U. S. SOIL CONSERVATION SERVICE. Cooperative research in soil and water conservation in Illinois. 21 pp., processed. [Urbana, Ill.?] June 1942. 1.96 R31Cf

This report, prepared in cooperation with Illinois Agricultural Experiment Station, consists chiefly of photographs, supplied by C. A. Van Doren and E. L. Sauer.

For distribution to U. S. D. A. workers, Federal and State cooperators, and libraries.

U. S. SOIL CONSERVATION SERVICE. UPPER MISSISSIPPI REGION. Boost corn and soybean yields (A farmers' guide for raising row crops on slopes). 4 pp., processed. [Milwaukee, Wis.] 1942. 1.9605 B641

How conservation farming practices can be employed to increase production of corn and soybeans.

U. S. SOIL CONSERVATION SERVICE. UPPER MISSISSIPPI REGION. Grassed waterways are safe ways (A farmers' guide in establishing sod in drainageways). 4 pp., processed. [Milwaukee, Wis., 1942] 1.9605 G761

WARTIME farming on the Southern Great Plains. U. S. Dept. Agr. Misc. Pub. 496, 12 pp. Washington, D. C., 1942. 1 Ag84M

WELD, W. A. Water disposal planning methods for soil conservation in the southeast. Assoc. South. Agr. Workers. Proc. (1942) 43: 29-30. 1942. 4 C82

COTTON GINS AND GINNING

PAULSON, W. E. Cotton ginning industry of Texas is now passing through trying period. Cost of ginning. Lower production volume to force sharp re-adjustments. Cotton Trade Jour. 22(42): 7. Oct. 17, 1942. 72.8 C8214

[TEXAS COTTON GINNERS' ASSOCIATION] Your association on the job; over \$200,000 saved. Cotton Ginners' Jour. 14(1): 7, 15-16. Oct. 1942. 304.8 C824

Part of the Association's correspondence file in connection with ceiling rates on ginning is published.

COTTON LINTERS

ROGERS, JOHN. The advantage gained in the production of higher quality cellulose linters. Oil Mill Gazetteer 47(4): 15-18. Oct. 1942. 307.8 O153

Address, National Oil Mill Superintendents Association, Fort Worth, Tex., May 21-22, 1942.

Discusses the production of quality linters suitable for use in the manufacture of powder.

WALLACE, T. P. Lint room operation. Oil Mill Gazetteer 47(4): 3, 5. Oct. 1942. 307.8 O153

Includes suggestions for producing linters.

COTTON SPINNING

A., R. H. Internal reconstruction in cotton spinning--II. Suggested schemes of conversions of plant in a typical case. Textile Mfr. 68(812): 320-323. Aug. 1942. 304.8 T3126

HELLIWELL, E. H. Card-room maintenance. Cleaning and scouring schedules for cotton carding and drawing equipment. Textile World 92(9): 96-97. Sept. 1942. 304.8 T315

HELLIWELL, E. H. Card-room maintenance. Inspection charts will keep mill management informed on machine condition. Textile World 92(10): 94-95. Oct. 1942. 304.8 T315

Illustrated with copies of machinery inspection forms.

INDIAN CENTRAL COTTON COMMITTEE. TECHNOLOGICAL LABORATORY. Study of cotton blow-room treatment. Effects of beater speeds in Crighton openers on three Indian cottons. Textile Mfr. 68(812): 317. Aug. 1942. 304.8 T3126

MITCHEM, RAYMOND W. Intelligent use of Strobotac in the spinning room will increase the production of frames and cut seconds. Textile World 92(10): 80-83. Oct. 1942. 304.8 T315

The instrument is used to measure spindle speeds. Report of tests covering 100 frames is given in a table.

"OVERLOOKER MEDALLIST." The fine yarn touch. Some extra mule motions which make Lancashire quality. Textile Weekly 30(757): 258-259, 262. Sept. 4, 1942. 304.8 T3127

SPIBEY, H. The card back and its adjustments. Textile Rec. 60(713): 21-22, 24. Aug. 1942. 304.8 T311

The eighth installment of the series.

SPIBEY, H. Card flat setting and tensioning. Textile Rec. 60(714): 23-24, 26. Sept. 1942. 304.8 T311

"This is the ninth instalment of the series on adjustment points in cotton spinning machinery."

COTTONSEED AND COTTONSEED PRODUCTS

CAMPBELL, C. R. Cottonseed oil mill control equipment. Oil Mill Gazetteer 47(3): 7, 8. Sept. 1942. 307.8 O153

HARRIS, W. D. Solvent extraction of cottonseed oil. Tex. Agr. Col. Bul. 12(12): 1-31. Sept. 15, 1941. 290.9 T31

Engineering Experiment Station Series no. 63.

Includes a discussion of the present technology of the cottonseed crushing industry and disadvantages in present processing methods, as well as the technology of solvent extraction.

SALE, O. H. Good separation and high protein with high lint cut. Oil Mill Gazetteer 47(3): 3, 5. Sept. 1942. 307.8 O153

Cottonseed hull separation at oil mills is discussed.

CROPS (DRYING)

CASE, LUCY A. Home food preservation by canning, drying, salting. Oreg. Agr. Col. Ext. Bul. 596, 16 pp. Corvallis, 1942. 275.29 Or32B

DEHYDRATING fruits and vegetables. Farm Res. [N. Y. State Sta.] 8(4): 7. Oct. 1, 1942. 100 N48A

Numerous varieties of different vegetables and fruit are under test for effect of process on palatability and nutritive value.

DRYING lamps for the dehydration of foods. Mag. of Light 11(7):
41-44. Oct. 12, 1942. 335.8 M272

DRYING of foods. Heating, Piping and Air Conditioning 14(10):
588-591. Oct. 1942. 291.8 H352

Describes various problems involved.

GRAY, L. W. Home-drying fruits and vegetables. Elect. World
118(16): 1316, 1320. Oct. 17, 1942. 335.8 E12

GUILLOU, RENE. Developments in fruit dehydrator design. Agr.
Engin. 23(10): 313-316. Oct. 1942. 58.8 Ag83

HARMON, RALPH L. New milk powder plants reinforce the food front.
[U. S.] Farm Credit Admin. News for Farmer Coops. 9(3): 11, 20-21.
Aug. 1942. 166.2 N47

In Wisconsin the cooperatives have installed dryers to take care
of the surplus skimmed milk.

HENSLEY, HARRY C. Dehydrator types and equipment of cooperative as-
sociations; address...before the Conference on dehydration, Agri-
cultural and mechanical college of Texas, College Station, Tex...
Sept. 15, 1942. 10 pp., processed. [Washington, D. C.] U. S.
Farm credit administration, 1942. 1.955 C2D36

HUCKER, G. H., and SANBORN, J. R. Packaging dehydrated fruits and
vegetables. Farm Res. [N. Y. State Sta.] 8(4): 1, 7. Oct. 1,
1942. 100 N48A

Some form of paper container may be the solution—different
products present different problems.

MCCANN, HIRAM. Dehydration saves many ships. Farmer Mag. 39(10):
7, 47, 61. Oct. 1942. 7 C165

New developments in retaining original flavors may lead to wider
markets after the war.

OLD THRESHER dried grain. Farm Jour. and Farmer's Wife 66(11): 81.
Nov. 1942. 6 F2212

SCHWANZ, LEE. Meat minus moisture. Iowa Agriculturist 43(3): 6, 13.
Oct. 1942. 6 I09

"Dehydration of meats reduces shipping space to ninety percent
of fresh meat requirements and refrigeration is unnecessary."
Method is given.

WARE, L. M. Factors affecting the cost and rate of drying of sweet
potatoes by natural means. Assoc. South. Agr. Workers. Proc.
(1942) 43: 183. 1942. 4 C82

WIEGAND, ERNEST H., and PRICE, F. E. Oregon's food dehydration
program. Oreg. Agr. Expt. Sta. Cir. Inform. 274, 18 pp., processed.
Corvallis, 1942. 100 Or3C

DAIRY MACHINERY AND EQUIPMENT

CONSERVING milking machine rubber parts. Farm Impl. News 63(19): 35.
Sept. 17, 1942. 58.8 F22

GELPI, A. J., and others. The effect of type of cooler and holding
time on quality of milk. Assoc. South. Agr. Workers. Proc. (1942)
43: 111-112. 1942. 4 C82

Methods of cooling studied included following: (1) Cans of warm
milk placed in cooling tank, (2) milk cooled on farm type of con-
ical cooler with ice water as cooling medium, (3) milk cooled over
surface tubular cooler with circulating mechanically refrigerated
cold water supplied from a milk storage tank.

- HENDERSON, J. L., ROADHOUSE, C. L., and FOLGER, A. H. Sanitary care, operation, and installation of milking machines. Calif. Agr. Col. Ext. Cir. 69, 16 pp. Berkeley, 1942. 275.29 C12C
 PUTTING the first things first in care of milking machines. Hoard's Dairyman 87(14): 389, 391, 398. July 25, 1942. 44.8 H65

DRAINAGE

- DELWICHE, E. J., and HOLT, D. H. Drain level lands - to sow grain earlier - to get larger yields. Wis. Agr. Expt. Sta. Stencil Cir. 230, 2 pp. Madison, 1942. 275.29 W753
 JONES, LEWIS A. Interrelation of drainage and soil conservation practice. Assoc. South. Agr. Workers. Proc. (1942) 43: 32-33. 1942. 4 C82

- MATSON, HAWARD. The effect of grazing in maintaining open drainage ditches. Assoc. South. Agr. Workers. Proc. (1942) 43: 31. 1942. 4 C82

Effect of grazing on maintenance of open drainage ditches has been studied for past three years in several areas in south Louisiana where CCC camps have been assisting in rehabilitation of existing drainage facilities. Value of grazing as means of controlling vegetable growth in open drainage channels has been demonstrated in these areas.

- NICHOLSON, H. H. Principles of field drainage. 165 pp., illus. Cambridge, University press, 1942. 54 N52

"The author's aim has been to draw attention to the fundamentals of the subject, to portray a philosophy of draining, and to deal with the factors involved and the way in which they influence events in the soil, in the belief that the sounder and more complete the appreciation of any situation is, the more effective the measures taken to deal with it can be made." - Preface.

- OTIS, C. K. Methods of moisture drainage from silos. Agr. Engin. 23(10): 321-323. Oct. 1942. 58.8 Ag83

- RAMSAY, ALAN. 150,000 Cheshire drainage scheme. Farmer and Stock-Breeder and Agr. Gaz. 56(2762): 1433, 1436. Sept. 15, 1942. 10 F228

- TISDALL, A. L. Drainage investigations in the horticultural soils of the Murray Valley. Austral. Council Sci. & Indus. Res. Pam. 133, 23 pp. Melbourne, 1942. 514 Au72P

- WALL, CLAUDE H., and YOUNGQUIST, C. V. Ohio stream drainage areas and flow duration tables. Ohio Engin. Expt. Sta. Bul. 111, 73 pp. Columbus, 1942. 290.9 Oh3

ELECTRICITY ON THE FARM

- BROWN, HARRY L. How electricity and machinery on the farm can contribute most to the agricultural defense program. Assoc. South. Workers. Proc. (1942) 43: 66-68. 1942. 4 C82

Though electricity on farm is in one sense a luxury, if wisely used it is obedient and faithful servant. It can more than pay its way in saving of labor alone.

Farm machinery if adapted to particular farm is most practicable means of meeting labor shortage. Larger farms are already mechanized.

The challenge to the farm machinery people today is to adapt machinery to small and medium-sized farms.

EDMOND, J. B., and DUNKLEBERG, G. H. Use of electricity in curing and storing sweet potatoes. Assoc. South. Agr. Workers. Proc. (1942) 43: 182. 1942. 4 C82

Studies on use of electricity in curing and storing of sweet potatoes show that from 0.4 to 1.1 kilowatt hours of electricity were necessary to cure each bushel of roots and from 1.3 to 2.7 kilowatt hours were necessary to store each bushel of roots.

Data show that electricity is economical source of heat for curing and storing. Additional advantage of electricity is maintenance of relatively uniform temperature together with uniform relative humidity. This uniform temperature combined with uniform relative humidity is favorable for long storage life of roots. Results also show that high relative humidity can be maintained by use of dirt floor.

EFFECTIVE farm service program based on study of individual needs. Edison Elect. Inst. Bul. 10(9): 351-353. Sept. 1942. 335.8 Ed4

Rural service activities that won Martin Award for Puget Sound Company.

HAZEN, LESLIE E. Feed and food preparation with gas and electric power. Assoc. South. Agr. Workers. Proc. (1942) 43: 39-41. 1942. 4 C82

HUNTER, F. M. Relation of farm and home electrification. Assoc. South. Agr. Workers. Proc. (1942) 43: 38. 1942. 4 C82

SMITH, MAUDE. Relation of farm and home electrification. Assoc. South. Agr. Workers. Proc. (1942) 43: 39. 1942. 4 C82

FARM HOUSES

BROMAGE, ARTHUR W., and BROMAGE, MARY C. The housing program in Ireland. Social Serv. Rev. 16(3): 497-519. Sept. 1942. 280.8 Sol
Government programs for housing improvement in Ireland. Some attention is given to the rural housing program, pp. 505-506.

BURBANK, NELSON L., comp. House construction details. Ed. 2, 313 pp., illus., lithographed. New York, Simmons-Boardman pub. corp. [1942] 296 B89

"Designed to be used as a companion volume to the author's Carpentry and Joinery Work." - Introduction.

McALLISTER, GILBERT, and McALLISTER, ELISABETH G. Town and country planning; a study of physical environment; the prelude to post-war reconstruction... with a foreword by the Rt. Hon. Arthur Greenwood, M. P. 176 pp. London, Faber [1941]. 296.2 M12

Rural housing, pp. 22-29.

STANDING, T. G. Importance of good housing to the social, moral, and physical development of the family. Assoc. South. Agr. Workers. Proc. (1942) 43: 37-38. 1942. 4 C82

Regardless of the way in which it is financed, comprehensive rural housing program can be expected to yield enormous dividends in the form of increased health and happiness for millions of farm families.

STANDING, T. G. The problem of rural housing in the South. Rural Sociol. 7(3): 267-275. Sept. 1942. 281.28 R88

The problem is stated.

U. S. BUREAU OF THE CENSUS. Housing, equipment and fuel for home heating for the United States, by regions, divisions, and states, urban and rural: 1940. Stove Builder 7(10): 15-16. Oct. 1942. 291.8 St7

U. S. BUREAU OF THE CENSUS. Housing, fuels used for cooking in the north, south, and west, urban and rural: 1940. Stove Builder 7(10): 24, 26. Oct. 1942. 291.8 St7

FARM MACHINERY AND EQUIPMENT

ATHERTON, R. P. Labor--machinery--production costs. New England Homestead 115(20): 6-7. Oct. 3, 1942. 6 N442

If existing conditions are to be corrected farmers must have year-round men and women helpers trained in agricultural pursuits.

BERESFORD, HOBART. Bulk handling of potatoes. Idaho. Agr. Expt. Sta. Bul. 86, 7 pp. Moscow, 1942. 100 Id1

Johnson system uses field pickup carts loaded from picker baskets, hauled to storage cellar by horses, and dumped over center- or top-opening cellar

BERNSTEIN, IRVING. Farm machinery demand and supply, price, and government regulation, 1917-1918, prepared in the Division of historical studies of wartime problems...under the direction of Stella Stewart. U. S. Bur. Labor Statis. Hist. Studies of War-time Prob. 28, 30 pp., processed. [Washington, D. C.] 1942. 158.6 H62

Notes, pp. 28-29; Sources, p. 30.

BINDER knotter troubles. Purdue Agr. Ext. Leaflet 227, [2 pp.] [Lafayette, Ind.] 1942. 275.29 In2L

CANNON, ROWLAND M. Planting segmented seed with conventional drills. U and I Cult. 2(3): 5-6. Oct. 1942. 66.8 U12

For best results with segmented seed, enough seed should be planted to allow reasonable margin of safety for securing suitable after-thinning stand, but as amount used exceeds this point, labor requirement increases. Thus planting operation becomes precision job and merely adapting drill feed to handle segmented seed will not insure good results. Drills must be carefully maintained and care should be exercised in all phases of planting operation.

CASTOR bean sheller. Chemurg. Digest 1(18): 1. Sept. 30, 1942. 381 N213Na

Results obtained by this machine are very encouraging. While there are many factors, such as variety, maturity, moisture content of bean, that affect shelling percentage, it is possible, by adjustment of equipment, to solve partially these problems. Most of tests indicate that percentage of beans shelled averages over ninety per cent and, in some cases, this rate has been ninety-nine per cent. Amount of injured beans is very small and frequently is less than one one-hundredth of one per cent. Amount of beans remaining in shell, likewise, is very small and in some of tests percentage was as low as three-tenths of one per cent.

CHECK your farm machinery now! For needed repairs. Clemson Agr. Col. S. C. Inform. Card 61. Clemson, 1941. 275.29 So81

CORRECT combine operation aids in soybean harvest. Ohio Farmer 190(8): 9. Oct. 17, 1942. 6 Oh3

DETAILS of the new "Catchpole" combined sugar beet harvester. Farm Impl. and Mach. Rev. 68(809): 391-392. Sept. 1, 1942. 58.8 Im72

Designed to meet requirements of large acreage grower who farms on big scale and has fully mechanized all his operations.

DINGWALL, A. R., and CAMPBELL, M. J. Ploughs and ploughing. New Zeal. Dept. Agr. Bul. 185, 12 pp. Wellington [1942?] 23 N48Bu
Functions and care of various types and designs.

ENGINE, S. A., POND, G. A., and HINDS, M. K. A preliminary report of data secured in 1941 on the farm accounting route in Nicollet county, Minnesota...F. E. Wetherill, Routeman. Minn. Univ. Div. Agr. Econ. Mimeographed Rpt. 131, 27 pp. University Farm, St. Paul, May 1942. 281.9 M66

Gives cost of operation of tractors, automobiles and trucks.

FARM equipment rationing arrives. Northwest Farm Equip. Jour. 56(10): 22, 24. Oct. 1942. 58.8 F222

Acting under authority, Department of Agriculture as of September 17, "froze" in hands of dealers various items of farm equipment, none of which may be sold from that date onward except in accordance with regulations now to be set forth.

Interim procedure, to govern from now to November 1, has been set up under which three categories have been established--"A" machines that can be obtained only through action by local rationing committees of County War Boards; "B" other farm equipment listed in Limitation Order L-26, which can be obtained by farmer if he certifies to rationing committee that such machines are essential to his operation, and "C" repairs, and list of miscellaneous items not included in two foregoing categories, which are not restricted.

GREEN, H. B. Parish machinery pools for 23,000 acres. Farmer and Stock-Breeder and Agr. Gaz. 56(2760): 1345. Sept. 1, 1942. 10 F228

How the East riding farmers of Yorkshire are running their own help-your-neighbor schemes on a business basis.

GREGORY, R. W. National farm machinery repair program launched. Agr. Leaders' Digest 23(8): 12. Oct. 1942. 275.28 Am3

GROUND duster for cotton. Ariz. Farmer 21(17): 9. Aug. 29, 1942. 6 Ar44

A ground duster to take the place of airplane dusting is illustrated.

HE MECHANIZED cane production. Farm Impl. News 63(20): 34-35. Oct. 1, 1942. 58.8 F22

For 25 years, B. C. Thomson--dealer-manufacturer--has given Louisiana sugar cane growers the equipment they needed even if he had to invent it, as he did.

HIGGINS, F. HAL. Harvest beets by machine--or else! Impl. Rec. 39(10): 14-17. Oct. 1942. 58.8 Im73

Building on UC-USDA foundation, and driven by this season's crucial necessity, a few resourceful growers have made great progress--but standard, full-line combines still are a season or two away, under war handicaps.

HUTCHINSON, C. J. Homemade peanut picker. La. Agr. Col. Ext. Cir. 250, 4 pp. Baton Rouge, 1942. 275.29 L93C

JENKINS, LAWRENCE. Harvesting seed of vetches, winter peas, crimson clover, and ryegrass. Oreg. Agr. Col. Ext. Bul. 597, 20 pp. Corvallis, 1942. 275.29 Or32B

Purpose of bulletin is to furnish practical information on harvesting these seed crops. It is hoped that it may help to prevent loss of seed, delays, and unnecessary expense in harvesting.

JOHANNSEN, W. S. Help's on the way for tired machinery. Successful Farming 40(11): 13, 60, 61. Nov. 1942. 6 Sul2

JOHNSON, A. E. W. Changes in hay handling methods and equipment. Agr. Engin. 23(10): 325, 327. Oct. 1942. 58.8 Ag83

In reviewing many diverse methods of hay harvesting, attention is called to requirements and economic conditions which determine to great extent methods used in various sections of country. Type of land devoted to this crop, and wide variation in acreage, without doubt, has had definite effect in shaping type of equipment used. Introduction of new pasture grasses, some of which will cut for hay, may bring on new harvesting problems. Unquestionably there will continue to be various methods and equipment used in handling of our domestic hay crop.

KESTER, WARREN. Panzer pickers for bumper crops. Iowa Agriculturist 43(3): 5, 14. Oct. 1942. 6 Io9

Mechanical harvesting of corn and soybeans.

KIEFFER, D. L. What English farmers work with. Pacific Rural Press and Calif. Farmer 144(3): 70. Aug. 8, 1942. 6 Pl12

Brief summary of the farm machinery situation in England.

KRUEGER, W. C. Machine care safeguards production. Hints to Potato Growers 23(4): 1-4. July. 1942. 75.9 H59

LIMITATION and concentration of 1943 farm equipment production. Farm Impl. News 63(22): 12-19. Oct. 29, 1942. 58.8 F22

Industry divided into three classes on basis of 1941 volume.

Quota percentages average 20 percent of 1940 production. Order effective for twelve months beginning Nov. 1, 1942.

MACHINES to the rescue. Pacific Rural Press and Calif. Farmer 144(7): 174-175. Oct. 3, 1942. 6 Pl12A

MAKING fruit and vegetable juices in small lots. Farm Res. [N. Y. State Sta.] 8(4): 6, 7. Oct. 1, 1942. 100 N48A

Homemade press devised for use where a bushel or less of fruit is available--circular describes processing, preserving, and storing product.

MECHANICAL loaders beat labor drain. Impl. and Tractor 57(21): 15. Oct. 10, 1942. 58.8 W41

MERRILL, R. M. Machinery developments in relation to stubble mulch culture. Assoc. South. Agr. Workers. Proc. (1942) 43: 220-221. 1942. 4 C82

By stubble mulch culture is meant practice of maintaining, on surface of soil, mulch consisting of residues of preceding crop. Purpose of paper is to discuss some of machinery problems which are involved when crop residues are left on soil surface.

MILLER, CAP E. Stacking hay: Emergency labor and money saving method. Dakota Farmer 62(16): 340-341. Aug. 22, 1942. 6 D14

MYSTERY of rubber. Pop. Mechanics Mag. 78(5): 1-5, 170-171. Nov. 1942. 291.8 P81

Shows illustrations of harvester and planter of guayule plants.

NEEL, L. R. Harvesting and storing soy beans. South. Agr. 72(10): 15. Oct. 1942. 6 So83

Five-foot combine can gather an acre of beans an hour in good weather.

NEW DIXIE beet thinner. New Agr. 25(1): 9. Oct. 1942. 66.8 Su32

During field trials, thinned stand of sugar beets left by this mechanical blocker was generally as good as stands thinned by hand labor, being more evenly spaced with maximum of singles.

OLD ENGINE can be repaired. Wis. Agr. and Farmer 69(20): 22.

Oct. 3, 1942. 6 W751

PACKER, C. E. Servicing utility engines. Impl. and Tractor 57(21):

26-28. Oct. 10, 1942. 58.8 W41

POTATO harvest--bulk or bag. Idaho Farmer 60(21): 494. Oct. 8, 1942.

6 G282

PREVENTIVE maintenance on corn pickers and binders. Farm Impl. News

63(20): 18, 20. Oct. 1, 1942. 58.8 F22

RAMBO, EARL K. How to harvest your peanuts. Crop is ready to bring in when leaves turn yellow. Ark. Farmer 44(10): 11. Oct. 1942.

6 Ar42

RATION farm equipment. Farmer 60(20): 7. Oct. 3, 1942. 6 F2211

County committees headed by AAA chairmen will decide who may buy that which is available.

REED, I. F. Farm machinery program for southern farms. Assoc. South. Agr. Workers. Proc. (1942) 43: 68. 1942. 4 C82

Available one-mule equipment for terracing, turning legumes, planting, and cultivating is described and discussed. Machinery program is outlined for one-mule farmer whereby he may handle this work satisfactorily with limited labor now available.

ROEHL, L. M. Farm repair shop. N. Y. Agr. Col. (Cornell) Ext. Bul. 534 (War Emergency Bul. 46), 4 pp. Ithaca, 1942. 275.29 M48E

SELECT list of references on harvesting machinery. 1931 onwards.

Sci. Mus. Sci. Libr. Bibliog. Ser. 562, 2 pp., processed. South Kensington, London, S. W. 7, 1939. 241.5 L842

SIMPLIFYING the potato harvest. Farm Impl. and Mach. Rev. 68(809):

399. Sept. 1, 1942. 58.8 Im72

Discussion of the "Angus" potato picker.

SMITH, H. P., and KILLOUGH, D. T. Mechanical harvesting of cotton as affected by varietal characteristics. Mech. Engin. 64(8): 604-606.

Aug. 1942. 291.9 Am34

Paper presented at the spring meeting, Houston, Texas, Mar. 23-25, 1942, of the American Society of Mechanical Engineers.

Experiments to develop varieties of cotton that would lend themselves to mechanical harvesting are described, and limitations of mechanical harvesting are discussed.

SMITH, L. J. Can we win the war with less farm machinery and labor.

Farm Impl. News 63(21): 15. Oct. 15, 1942. 58.8 F22

Unless this alarming situation is remedied, and quickly, how can American agriculture continue producing sufficient foods for ourselves

and our Allies? We are steadily becoming stronger on war front but weaker on food front. Partial remedy of this serious condition would be at least normal allotment of metals for normal farm machinery needs of American agriculture, and some definite recognition of essential farm labor needs.

SORENSEN, S. H. Rebuilding trade-in harvesters and combines. Farm Impl. News 63(21): 18-19. Oct. 15, 1942. 58.8 F22

SURVEY shows New York farmers need many new machines. Farm Impl. News 63(22): 45. Oct. 29, 1942. 58.8 F22

Results of survey conducted by Farm Machinery Committee of the Extension Wartime Council of the New York State College of Agriculture.

TEMPORARY rationing order for new farm equipment. Farm Impl. News 63(20): 29-32. Oct. 1, 1942. 58.8 F22

Issued by the Department of Agriculture by authority of the War Production Board and the Office of Price Administration--known officially as TRO-A.

TO PROMOTE machinery rental. Better Farm Equip. and Methods 15(1): 12-13. Sept.-Oct. 1942. 58.8 B46

"New Idea" sponsors plan for farmers to help each other.

U. S. FARM SECURITY ADMINISTRATION. Sharing farm equipment. U. S. Farm Security Admin. Pub. 106, 11 pp. Washington, D. C. [July 1942] 1.95 F94

Concerning the cooperative ownership and operation of farm equipment, and the program of the Farm Security Administration for encouraging such cooperative activities.

WHY BEND your plough? Farm Impl. News 63(22): 42. Oct. 29, 1942. 58.8 F22

Care of plough.

WHY NIGHT ploughing becomes essential. Farmer and Stock-Breeder and Agr. Gaz. 56(2761): 1385. Sept. 8, 1942. 10 F228

Farm machinery production in U. S. A. will be reduced next year to 30 per cent of 1940 figure. During present year which ends in October, production has been curtailed to 80 per cent. Present range of approximately 60 models of tractors will be restricted to nearer sixteen. Adequate production program for spare parts will, however, be maintained.

WIRT, F. A. Gearing farm machinery to the war effort. Farm Impl. News 63(20): 36-37. Oct. 1, 1942. 58.8 F22

Responsibility of agricultural engineers under present conditions is threefold: (1) to assist in bringing about best possible use of such new machines as manufacturers may be permitted to build, (2) to promote efficient use of old machines through proper servicing and stocking of repair parts by implement dealers, and (3) to make their knowledge known to men in authority on all matters pertaining to application of engineering to agriculture.

ZINK, FRANK J. Farm machine capacity must be increased to offset shortage in labor if food production goal is met. Ind. Farmers' Guide 98(19): 22, 27. Oct. 1, 1942. 6 In2

ZINK, FRANK J. Integration of farm equipment into the war effort. Agr. Engin. 23(10): 317-320. Oct. 1942. 58.8 Ag83

Integration of agricultural engineering into war effort should

be effectuated through key factors of food production, land, labor, and equipment. At outset application of agricultural engineering principles to combinations of land, labor, and equipment is indirect procedure differing from direct practice used in structures, land improvement, or factory.

Engineering principles incorporated into machine are applied by farm operator who may never have heard of the engineer and who may reside on opposite side of earth. Engineered ideas in conjunction with management of equipment in its functional application may also be remotely conceived. This remoteness of direct relationship of engineer to job, inadequate analysis, and unsatisfactory checks on results obtained are primary weaknesses of profession. These weaknesses when coupled with broad scope of types of agricultural production, social strata of people involved, and number and intelligence of farm operators, mean that in war or in peacetime profession is no "fool's paradise" for sport of amateurs. It should be emphasized that utmost in critical analysis and most valid engineering principles must be united or profession may be buried along with its mistakes.

FARM POWER

BURKE, J. D. Efficient use of horses on New York farms. N. Y. Agr. Col. (Cornell) Ext. Bul. 530 (War Emergency Bul. 43), 12 pp. Ithaca, 1942. 275.29 N48E

JACKSON, WAYNE. Getting full measure from horse power. Better Farms 3(10): 4. Oct. 15, 1942. 6 B462

Farm power resources in this country consist of some 12 million horses and mules of work age, and 1-1/2 million tractors. In this emergency there will be plenty of work for both types of power. Those who need food now being produced on farms of America care little whether crops were planted, tilled, and harvested with animal or mechanical power, or as in case on many farms, combination of both. Important thing is that this food be produced and in sufficient amount, job which will require full use of horses and mules that are available on each farm.

MILLIGAN, D. A. How to increase farm production with reduced man power. Agr. Engin. 23(10): 309-311. Oct. 1942. 58.8 Ag83

There are five things that can be done to increase farm production with reduced man power. They are: (1) Reduce man labor per crop unit, (2) Reduce number of operations performed in producing of crops, (3) Work more hours per day, more days per week, more days per month, and more days per year, (4) Have well-organized and diversified system of crop and livestock production with distributed labor requirement, (5) Raise maximum yields.

FARM STRUCTURES

BRIGGS, C. L. Farm improvement is vital war measure. Mont. Farmer 30(4): 21. Oct. 15, 1942. 6 M764

The War Production Board's Conservation Order L-41 which regulates all types of building activity, is explained. The order permits remodeling and repair of farm homes and buildings.

BROKEN stocks of lumber can be turned into live merchandise. Canada Lumberman 62(20): 8-9, 31. Oct. 15, 1942. 99.81 C16

Discusses use of odd ends to make farm accessories.

COLLINS, MAURICE E. War-time remodeling. Capper's Farmer 53(10): 18, 50. Oct. 1942. 6 M693

For two thirds of expenditure possible under War Production Board rule, Christensen, who owns 120 acres and rents 80, did all of the following: Modernized and insulated 6 rooms of 90-year-old dwelling, converted drafty chicken shed into up-to-date laying house for 300 birds, equipped dairy barn with insulated ceiling and sidewalls, reroofed and insulated milkhouse, lined hog house with insulating board, insulated interior of brooder house. All materials used, including those for some miscellaneous improvements, cost less than \$1,000. Everything that went into service buildings, including new glass, galvanized nests, ventilators and louvres, lumber and insulating materials, came to under \$600. Materials for the dwelling cost \$350. No labor costs are included. Except for poultry house, all utility buildings were structurally sound.

CONCRETE masonry farm buildings. South. Dairy Prod. Jour. 32(4): 16-17, 18. Oct. 1942. 44.8 So83

General article pointing out many uses of concrete on the dairy farm.

COOK, GLEN C., comp. 380 things to make for farm and home. 325 pp. Danville, Ill., The Interstate, 1941. 58 C772T

Contents: Pt. I. Equipment for the home-farm shop; II. Woodworking and farm carpentry (1) Plans for miscellaneous equipment for the home and farm, (2) Plans for equipment needed for crops, (3) Plans for poultry equipment, (4) Plans for swine equipment, (5) Plans for dairy cattle equipment, (6) Plans for beef cattle equipment, (7) Plans for sheep equipment; III. Equipment involving metal work; IV. Farm concrete; V. Farm plumbing; VI. Electricity for the farm; VII. Farm fencing; VIII. Handy farm hints.

DEALERS recommend cement for many essential war-time farm improvements.

Miss. Val. Lumberman 73(40): 8-9. Oct. 2, 1942. 99.81 M69

ESTIMATED construction activity in continental United States, 1939-42.

U. S. Bur. Labor Statis. Monthly Labor Rev. 55(3): 601-603. Sept. 1942. 158.6 B87M

Farm construction is included.

FARM buildings in wartime. Farm Jour. and Farmer's Wife 66(11): 17.

Nov. 1942. 6 F2212

GIESE, HENRY. Current problems in farm structures. Agr. Leaders' Digest 23(8): 10-11. Oct. 1942. 275.28 Am3

HANDY hopper for green feed. Idaho Farmer 60(21): 501. Oct. 8, 1942. 6 G282

HAWKINS, FRANK. Light on production. Successful Farming 40(11): 18-19, 54, 55. Nov. 1942. 6 Sul2

Discusses location of windows in farm buildings.

JOHNSON, PAUL C. Wartime straw sheds. Successful Farming 40(11): 18, 97. Nov. 1942. 6 Sul2

LOW-COST remodeling. Farm Jour. and Farmer's Wife 66(10): 42-43. Oct. 1942. 6 F2212

REED, CHARLES H. Farm milk house. Hoard's Dairyman 87(20): 552, 560. Oct. 25, 1942. 44.8 H65

STONE, JOHN T. Farm buildings and the land. Mich. Agr. Expt. Sta. Quart. Bul. 25(1): 32-40. Aug. 1942. 100 M58S

All farm buildings in Charlevoix, Otsego, Presque Isle, Dickinson and Marquette Counties were classified and the soil of the individual farms rated. The general appearance of structures, their size and adequacy for the specific type of farming, their conveniences and equipment, their condition and the appearance of their surroundings were all considered in establishing seven farmstead types.

VERY latest in a plan for housing the young fellows. Jersey Bul. 61(33): 1402. Oct. 20, 1942. 43.8 J48
Plans.

FENCE POSTS

SHAW, T. E. How to select wooden fence posts. Purdue Agr. Ext. Ext. Bul. 283, [8] pp. Lafayette, 1942. 275.29 In2E

SMITH, G. E. P. Creosoted tamarisk fence posts and adaptability of tamarisk as a fine cabinet wood. Ariz. Agr. Expt. Sta. Tech. Bul. 92, pp. 223-254. Tucson, 1941. 100 Ar4

FERTILIZER PLACEMENT

ADAPTABLE fertilizer distributor. Farm Impl. and Mach. Rev. 68(809): 395-396. Sept. 1, 1942. 58.8 Im72

FERTILIZER placement tests. Ga. Coastal Plain Expt. Sta. Ann. Rpt. (1940/41) 21 (Bul. 32): 121. Tifton, July 1941. 100 G292

Placing fertilizer close to roots without mixing it thoroughly with soil, will cause large percentage of seedlings to die. Seedlings do not always die immediately after transplanting but may continue to grow weaker for two or three weeks before finally dying. This trouble is more severe in dry weather than in seasons of abundant rainfall. Placing fertilizer in equal bands, 2-1/2 inches to side of plants, is an effective way of reducing death rate. Mixing fertilizer in row before listing has also helped materially in obtaining better stands. Where growers do not have equipment for side placing fertilizers latter method is recommended. Where fertilizer placing machinery is used, fertilizer should be distributed equally on both sides of row as placing all of fertilizer on one side has resulted in potash deficiency and other malnutrition symptoms on side of plant receiving no fertilizer.

SMITH, H. P., BYROM, M. H., and MORRIS, H. F. Germination of cottonseed as affected by soil disturbance and machine placement of fertilizer. Tex. Agr. Expt. Sta. Bul. 616, 29 pp. College Station, 1942. 100 T315

FIRE PROTECTION

ARE YOUR house and barn safe from fire? Country Book 2(2): 72-73. Autumn 1942. 6 C836

Gives charts showing danger points.

BELL, JOHN. Lost--270 millions by fire. Farmer Mag. 39(10): 65. Oct. 1942. 7 C165

DOREN, NEIL. Controlling the menace of farm fires. Better Farms 3(9): 3, 14. Oct. 1, 1942. 6 B462

Prevention and precaution can cut farm fire loss to minimum.

FARM fires kill 3,500--cause \$100,000 damage. Prairie Farmer 114(20):

12. Oct. 3, 1942. 6 P883B

FIGHT fires before they start. Mich. Farmer 200(7): 137. Oct. 3, 1942. 6 M58

KIRCHER, W. H. Fire prevention is a wartime job. Farmer 60(20):

5, 12. Oct. 3, 1942. 6 F2211

Farmers and ranchers do what they can to eliminate hazards and prepare to fight fires should they occur.

KLEIN, JACK. Rural fire prevention. Calif. Cult. 89(20): 491, 499. Oct. 3, 1942. 6 C12

During 1941 farm fires destroyed total of about \$90,000,000 worth of property. Much of this loss could have been prevented.

PREVENT farm fires. Minn. Univ. Agr. Ext. Pam. 106, folder. [St. Paul, 1942. 275.29 M66P

PREVENTING farm fires. Utah Farmer 62(4): 6. Sept. 25, 1942. 6 D45

Majority of farm fires are due to just seven causes--(1) defective chimneys and heating apparatus, (2) combustible roofs, (3) lightning, (4) spontaneous ignition, (5) misuse of electricity, (6) matches and smoking, (7) gasoline and kerosene.

ROWLANDS, WALTER A., and TRENK, FRED B. Prevent farm fires. Wis. Agr. Expt. Sta. Spec. Cir., 16 pp. Madison, 1942. 275.29 W753

WILLIAMS, MARY D. Carelessness, the common enemy, must be conquered because it is a large contributing factor to fire loss. Ind. Farmers' Guide 98(19): 3, 11. Oct. 1, 1942. 6 In2

YOU CAN help prevent fires. Elect. on the Farm 15(10): 7. Oct. 1942. 335.8 E127

Loss of homes by fire is still danger in spite of modern fire-fighting efficiency. Each year hundreds of millions of dollars literally go up in smoke. Much of this loss is preventable, if we would only take necessary precautions.

FLAX

CALDWELL, S. A. G. Spinning quality of present flaxes. Progress in production and processing of Irish flax and its special peculiarities in properties. Textile Mfr. 68(812): 318, 319, 323. Aug. 1942. 304.8 T3126

FLOODS AND FLOOD CONTROL

WILM, H. G. New gaging station for mountain streams. Civ. Engin. 12(10): 548-549. Oct. 1942. 290.8 C49

Discusses accuracy with which extremes of flow in flashy mountain streams may be measured by this type of installation.

FLOORS

CARE of floors and woodwork. N. C. Agr. Col. Ext. Misc. Pam. 15, [4] pp. Raleigh, 1939. 275.29 N811M

FLOW OF WATER

STEVENS, J. C., BAKHMETEFF, BORIS A., and FEODOROFF, NICHOLAS V. Profile curves for open-channel flow: Discussion. Amer. Soc. Civ. Engin. Proc. 68(8, pt. 1): 1413-1423. Oct. 1942. 290.9 Am3P

HEATING

SIMONS, JOSEPH W., and LANHAM, FRANK B. Factors affecting temperatures in southern farmhouses. U. S. Dept. Agr. Tech. Bul. 822, 78 pp. Washington, D. C., 1942. 1 Ag84Te

HYDRAULICS

HICKOX, G. H. Hydraulic design of drop structures for gully control: Discussion. Amer. Soc. Civ. Engin. Proc. 68(8, pt. 1): 1424-1426. Oct. 1942. 290.9 Am3P

RUSSELL, GEORGE E. Hydraulics. Ed. 5, 468 pp. New York, Henry Holt and co., 1937. 290 R91

HYDROLOGY

HALL, L. STANDISH, and FOSTER, H. ALDEN. Statistical analysis in hydrology: Discussion. Amer. Soc. Civ. Engin. Proc. 68(8, pt. 1): 1458-1464. Oct. 1942. 290.9 Am3P

MEINZER, OSCAR E., ed. Physics of the earth--IX. Hydrology. 712 pp. New York and London, McGraw-Hill book co., inc., 1942. 292 M54

WEIR, WALTER W., and POWERS, W. L. Classification of irrigable lands. Amer. Soc. Civ. Engin. Proc. 68(8, pt. 1): 1452-1454. Oct. 1942. 290.9 Am3P

A discussion of W. W. Johnston's "Classification of Irrigable Lands," in the May 1942 issue of the Proceedings of the American Society of Civil Engineers. Stresses the need for land classification as a prerequisite to the establishment of irrigation projects, and the need for soil surveys as a basis for land classification.

INSULATION

HECHLER, F. G., McLAUGHLIN, E. R., and QUEER, E. R. Simultaneous heat and vapor transfer characteristics of an insulating material. Heating, Piping and Air Conditioning 14(9): 574-579. Sept. 1942. 291.8 H352

The paper discusses two major forces which influence transfer of vapor through building insulations. Two types of moisture movement are described and results of investigations and operation of test equipment used for determining moisture and vapor conditions are outlined. It was demonstrated that moisture can collect in or be driven from specimens under test and conductivity is not appreciably affected by first 7 per cent moisture.

IRRIGATION

COX, MAURICE B. Tests on vegetated waterways. Okla. Agr. Expt. Sta. Tech. Bul. T-15, 23 pp. Stillwater, 1942. 100 Ok4

INDIAN irrigation research. Indian Engin. 122(2): 53. Aug. 1942. 290.8 In2

River meanders; Sand exclusion; Model experiments; Sand sampling; Soil mechanics.

SMITH, G. E. P. Production of Guayule rubber under irrigation. Agr. Engin. 23(10): 312, 324. Oct. 1942. 58.8 Ag83

WYLIE, C. E., and NEEL, L. R. Irrigated pasture for dairy cows. Assoc. South. Agr. Workers. Proc. (1942) 43: 104-105. 1942. 4 C82

LAND CLEARING

HEDGE and tree-stump clearing. [Gt. Brit.] Min. Agr. and Fisheries.
Bul. 101, 13 pp. London, 1942. 10 G794B

MOTORS. ELECTRIC

HARRISON, GEORGE R. Motors do the shoveling in Homfeld granary.
Elect. on the Farm 15(10): 8-9. Oct. 1942. 335.8 E127
Two 3-hp motors operate elevators for ear corn, shelled corn,
grain and straw, a cylinder sheller and a hammer mill. Much labor
is saved. Season's power cost under \$5.

PAINTS AND PAINTING

MONTANA STATE COLLEGE. RURAL ENGINEERING DEPT. Painting on the farm.
Mont. Farmer 30(3): 11. Oct. 1, 1942. 6 M764

POULTRY HOUSES AND EQUIPMENT

BOX NESTS take less space in house. Wis. Agr. and Farmer 69(20): 24.
Oct. 3, 1942. 6 W751

Description of some home-made box nests.

CHARLES, T. L., and others. Problem of moisture in poultry house
litter, by T. B. Charles, A. E. Tepper, W. T. Ackerman, B. W. French,
R. C. Durgin, and R. B. Halpin. N. H. Agr. Expt. Sta. Bul. 338,
30 pp. Durham, 1942. 100 M45

DAIRY barn laying house. Farm Jour. and Farmer's Wife 66(11): 84.
Nov. 1942. 6 F2212

EFFECT of light on egg production. Elect. World 118(12): 110, 112.
Sept. 19, 1942. 335.8 E12

Tests made last fall and winter on three lots of 100 hens each,
show that egg production is practically in direct proportion to
hours of light, according to report published by Southern California
Edison Company. Table shows results of tests. Additional to im-
proved egg production, there was observable increase in weight of
hens, making them more profitable in poultry market. Although all-
night lighting showed highest returns in eggs, those in charge of
experiment recommended morning lighting as best for birds to be
retained for another laying year. They regard the long hours of
lighting as good for hens in second year moult destined for mar-
keting.

HUNT, WALTER J. Horse barn took wings. Successful Farming 40(11):
19, 38. Nov. 1942. 6 S12

QUIGLEY, GEORGE D. An all season range shelter for poultry. Md.
Univ. [Agr.] Ext. Cir. 138, [8] pp. College Park, 1942.
275.29 M36L

TRAVES, C. W. Brooding and rearing of chicks and poults. Alberta
Dept. Agr. Ext. Leaflet 56, 7 pp. Edmonton, 1942. 275.29 A1122

VERNON, W. M. Laying house gets a shot in the arm. Successful
Farming 40(11): 58, 86, 87. Nov. 1942. 6 S12

QUICK FREEZING

CARLTON, HARRY. Frozen foods and our civilian food supply. Ice and
Refrig. 103(4): 235-239. Oct. 1942. 295.8 Ic2
Report reviews critical food situation and points out how little

non-recurring critical material would be required for additional freezing facilities, in comparison with critical materials used for cans alone in preserving our protective foods by canning for even one season.

- FUNK, E. M. Some factors influencing the rate of freezing in dressed poultry. Quick Frozen Foods 5(2): 18-19. Sept. 1942. 389.8 G4
- PENTZER, W. T. Precooling & transit temperature studies with grapes. Blue Anchor 19(3): 10-16. Aug. 1942. 286.83 B62
- SNOWDEN, ROBERT S., JR. Thrilling new industry challenges the agricultural engineers of the entire world. Assoc. South. Agr. Workers. Proc. (1942) 43: 62-64. 1942. 4 C82
- Discusses quick freezing and preservation of food at point, or place where it was produced.

RAINFALL AND RUNOFF

- STAUFFER, R. S. Runoff, percolate, and leaching losses from some Illinois soils. Amer. Soc. Agron. Jour. 34(9): 830-835. Sept. 1942. 4 Am34P
- Paper includes some further data on runoff and percolate from these soils and gives results of chemical analyses for approximately 3 years and 8 months.

RECLAMATION

- LLOYD, E. WALFORD. The lost acres are bearing fruit. Reclaiming derelict land. Field 178(4627): 286. Aug. 30, 1941. 10 F45
- Cites examples of what British farmers are doing to make worthless lands productive.
- U. S. BUREAU OF RECLAMATION. Columbia Basin reclamation project, Washington: Quincy district appraisals. 267 pp. Washington, D. C., 1942. 156.85 C724

REFRIGERATOR LOCKERS

- BRADY, D. E. Meat preservation with freezer lockers. West. Frozen Foods 3(11): 6-7. Sept. 1942. 389.8 W523
- ORR, NITA. Housewife and her locker. Refrig. Engin. 44(4): 235-236. Oct. 1942. 295.9 Am32J
- Describes growing popularity of frozen food locker among farm families, and shows how its use is economic aid and direct contribution to health.
- PURNELL, R. G. How locker refrigeration benefits farmers in Lee county, Mississippi. Assoc. South. Agr. Workers. Proc. (1942) 43: 64-65. 1942. 4 C82
- WARNER, K. F. Frozen food lockers in the war. Agr. Leaders' Digest 23(8): 16-17. Oct. 1942. 275.28 Am3
- WELBORN, ROLAND. Locker plant as a processor of home-grown foods. Quick Frozen Foods 5(2): 40, 45, 49. Sept. 1942. 389.8 G4

ROOFS

- BENSON, H. S. Conservation program for galvanized roofing. Agr. Leaders' Digest 23(8): 8-10. Oct. 1942. 275.28 Am3

SEWAGE DISPOSAL

- BRINLEY, FLOYD J. Relation of domestic sewage to stream productivity. Ohio Jour. Sci. 42(4): 173-176. July 1942. 410 Oh3

SOILS

ALBRECHT, W. A. Health depends on soil. The Land 2(2): 137-142.
May-June-July 1942. 279.8 L22

On the importance of soil composition and quality to health, including an outline of the processes and agencies of soil formation, a description of the major soil regions of the United States, and a brief description of the process of plant nourishment.

BENNETT, HUGH H. Soil: a common denominator. The Land 2(2): 146-148. May-June-July 1942. 279.8 L22

Address at Friends of the Land Meeting, July 23-25, St. Louis.

Soil is a "common denominator" because all peoples everywhere have some knowledge of its importance and problems connected with it. The soil thus serves as a basis for cooperative activity and international understanding.

DETWILER, JOHN D. Soil: a renewable resource. The Land 2(2): 168-170. May-June-July 1942. 279.8 L22

HOLMES, R. S., and HEARN, W. E. Chemical and physical properties of some of the important alluvial soils of the Mississippi drainage basin. U. S. Dept. Agr. Tech. Bul. 833, 82 pp. Washington, D. C., 1942. 1 Ag84Te

STORAGE OF FARM PRODUCE

ALBERTA. DEPT. OF AGRICULTURE. FIELD CROPS BRANCH. Storing grain crops on the farm. Alberta Dept. Agr. Agr. Ext. Serv. Cir. 34, rev. [3] pp. Edmonton, Aug. 1942. 275.29 A1122

ANDERSON, W. S. Curing and storage of sweet potatoes. Assoc. South. Agr. Workers. Proc. (1942) 43: 68. 1942. 4 C82

It is recommended, (1) that sweet potatoes be handled carefully to reduce bruising to minimum; (2) that they be stored in house provided with facilities for heating and capable of being closed tightly or ventilated; (3) that they be cured for about ten days at 85 to 90° F. and 85 to 90% humidity; and (4) that they be stored at temperature of 55 to 60° F. and humidity of 75% or above.

BARRE, H. J., and COTTON, R. T. Recent developments in the farm storage of grain. Assoc. South. Agr. Workers. Proc. (1942) 43: 154. 1942. 4 C82

BARRE, H. J., and HOLDEN, LEO E. Your crop's no better than your crib. Successful Farming 40(11): 52-53. Nov. 1942. 6 S12

HARVESTING, storing and marketing soybeans. Minn. Univ. Agr. Ext. Pam. 104, folder. St. Paul, 1942. 275.29 M66P

ISELY, C. C. Too many bins. Northwest Miller 211(14): 25. Sept. 30, 1942. 298.8 N81

Asserts that in Kansas not more than 40% of the prefabricated wooden bins hold any wheat at all. Questions the wisdom of "government wheat storage planners."

LONG, THOMAS E. Temperature studies in various types of potato storage houses. N. Dak. Agr. Expt. Sta. Cir. 66, [4] pp. Fargo, 1942. 100 N813

MURRAY, MILDRED. Build a cellar. South. Agr. 72(10): 12. Oct. 1942. 6 S083

Temporary storage cellar in which to keep extra vegetables usually wasted during summer will be turned to this fall by many farmers as

the need for food conservation grows. Since vegetables are not being canned in large quantities by factories this year, every extra cabbage head will be needed. Most useful cellar will be large enough to hold canned goods as well as potatoes, turnips, beets, carrots, cabbage, celery, onions and apples.

Very satisfactory and economical cellar suited to emergency use may be constructed of poles and rough boards or mill slabs, agricultural extension department of University of Kentucky has found. Storage room, size 10 by 12 feet, may be built for as low as \$27 even if every pole must be bought.

RUTHERFORD, D. M. Grain storage--Richardson version. Pacific Rural Press and Calif. Farmer 144(3): 77. Aug. 8, 1942. 6 F112

Description of a farm storage elevator.

STARK, ARVIL L. Home storage of vegetables. Utah Farmer 62(4): 3, 11, 15. Sept. 25, 1942. 6 D45

Harvesting and preparing crops for storage, and types of storages are subjects considered.

URGES farm storage of crops. Better Farm Equip. and Methods 15(1): 16. Sept.-Oct. 1942. 58.8 B46

Storage on farm remains most feasible means of housing record 1942 crops of small grains and beans being produced in support of nation's war program.

VEGETABLE storage not difficult. Idaho Farmer 60(21): 494. Oct. 8, 1942. 6 G282

Storage arrangements can be extensive and complete or they can be simple depending on time, money and availability of materials. Complete storage room, either constructed in basement or erected as separate building, is most satisfactory answer to all storage problems on long-time basis. Either above ground or underground, it provides properly controlled temperature and humidity conditions for all types of fruits and vegetables as well as a safe and accessible place for canned goods.

WEAVER, ANNA D. Solved--winter's menu problems by fall storage of vegetables. Nebr. Farmer 84(21): 8. Oct. 17, 1942. 6 N27

TERRACING

"ON THE LEVEL." Better Farm Equip. and Methods 15(1): 8-9. Sept.-Oct. 1942. 58.8 B46

Terracing projects stimulate interest in more extensive individual use of farm levels.

TRACTORS

KEEP tractor well oiled. South. Agr. 72(10): 19. Oct. 1942. 6 So83

"PINT-SIZE" tractor handles like baby carriage. Pop. Mechanics Mag. 78(5): 77. Nov. 1942. 291.8 P81

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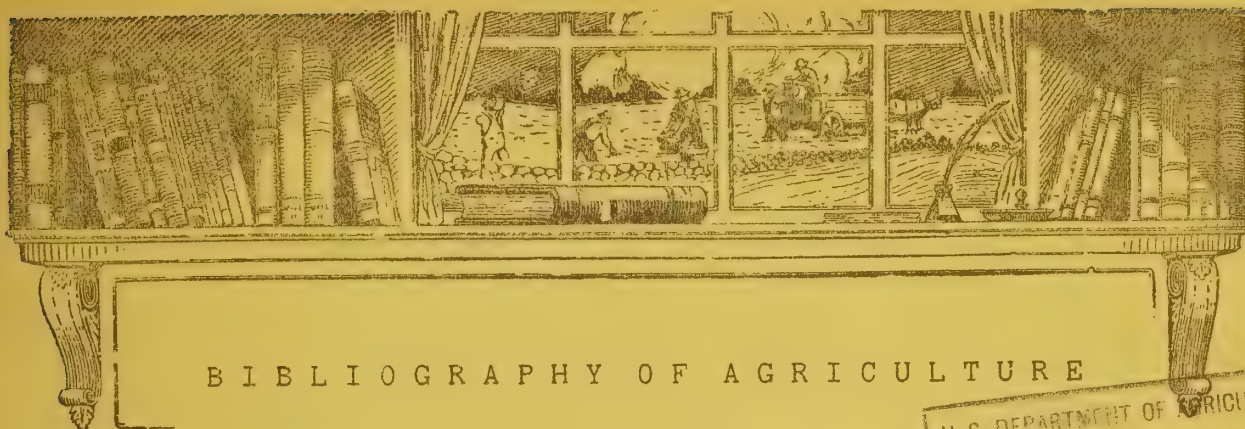
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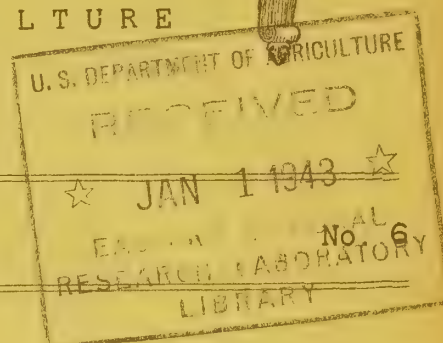
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Vol. 1

December 1942

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COOK, W. H. Surface drying of frozen poultry during storage. 407-418 pp. In Canadian committee on storage and transport of food. Collected papers, v.1, 1938-1941, no.29. [n.p., 1941] 389.9 C1 Reprinted from Food Research, v.4, no.4, 1939.

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DEHYDRATOR with new mixing process introduced. Fruit Prod. Jour. and Amer. Vinegar Indus. 22(2): 56. Oct. 1942. 389.8 F94

Describes the dehydrator developed by the Drying and Concentrating Co. A sketch of the equipment is included.

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Progress in Switzerland.

FIGHTING food flows in golden stream from a co-op creamery-- but it's "egg powder" -- not butter. Farm Credit Messenger 17(3): 5, 7. Oct. 1942. 284.28 F312

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MAXWELL, ROSINA K. Food preservation guide. 264 pp. North Chicago, Ill., Bunting pub. inc., c1942. 389.3 M452

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Includes brief discussion of the dried fruits industry.

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Results of a ten-year study on the use of lights in hen houses to increase production of eggs.

TENNESSEE UNIVERSITY. COLLEGE OF AGRICULTURE. DIVISION OF
EXTENSION. Light up and speed up fall egg production.
Tenn. Agr. Col. Ext. Leaflet 39, 1 p. Knoxville, 1942.
275.29 T25L

FARM HOUSES

HOUSING for small farmers. Jamaica Agr. Soc. Jour. 46(6&7): 149-189. June-July 1942. 8 J223

Gives plans, list of materials, estimates of costs.

LOW cost farm homes in the South add to milk output for lend-lease. Amer. Builder and Bldg. Age 64(11): 46-47. Nov. 1942. 296.8 A43

Basic planning for Alabama community dairy project adaptable to other areas under present restrictions. Precut framing, minimum of equipment and critical materials can keep costs within war limitations.

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CHECK and store farm machinery. Hoard's Dairyman 87(22): 630. Nov. 25, 1942. 44.8 H65

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Study consists primarily of testing available one-mule side-placement fertilizer distributors and one-mule combination-fertilizer distributors and planters.

DO the job right!!! Take these steps: 1. Check your machinery, 2. Order parts you need, 3. Report if parts unavailable. Tenn. Agr. Col. Ext. Leaflet 40, folder. Knoxville, 1942. 275.29 T25L

ELECTRICALLY driven cultivators with suspended flexible supply cable. Elect. Times 102(2658): 475. Oct. 1, 1942. 335.8 E126

Method is suitable for fields of about half acre, suspension wire being fixed across centre of field. For larger fields, it is necessary to move masts to two or more positions depending on size of fields. Apart from difficulty of supply, electric cultivators are said to give better performance than petrol engine units. They can be overloaded more highly and will carry on when petrol engines would stall. They are silent, robust, and no skilled attention is required as in the case with petrol engines.

FIELD cutting is coming. Wis. Agr. and Farmer 69(22): 3, 19. Oct. 31, 1942. 6 W751

Discusses mechanical handling of grass and corn crops in Wisconsin. Results of experiments at Wisconsin Agricultural Experiment Station.

GOTTHELF, M. W. Watch these plugs. Impl. & Tractor 57(23): 30, 32, 68-69. Nov. 7, 1942. 58.8 W41

GOVERNMENT freezes sales of heavy new farm equipment prior to issuing permanent rationing plan; Tables give 1943 quotas for manufactures. Impl. & Tractor 57(23): 59-60, 62-64. Nov. 7, 1942. 58.8 W41

HARROLD, A. E. How to conserve batteries. Impl. & Tractor 57(23): 36, 38, 65. Nov. 7, 1942. 58.8 W41

HERE'S an outline for a talk on care of farm machinery. Farm Equip. Merchandiser 5(8): 1,2. Aug.-Sept. 1942. 58.8 F2291

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An illustrated account of beet harvesting machinery.

IT'S a question of economic philosophy ... whether to bring the severed corn or grass to the cutter at the silo or to sever and cut the crop at one operation in the field and then just blow it at the silo. Farm Impl. News 63(24): 16-17. Nov. 26, 1942. 58.8 F22

JOHANNSEN, W. S. Why equipment maintenance? Impl. & Tractor 57(23): 22-23, 67, 75-76. Nov. 7, 1942. 58.8 W41

KIMBLE, ELLIS, and ROSS, R. C. Economic study of harvesting with small combines in Illinois, 1940. Ill. Univ. Agr. Col. Agr. Expt. Sta. AE-1873, 22 pp., processed. [Urbana] July 1942. 275.29 I162P

Report of a study made in 1940 to ascertain the advantages and disadvantages of each size of combine, and to determine the size best suited to various sizes of farms and systems of farming."

KRANICK, Frank. Meet the plow. Impl. and Tractor 57(24): 8-10, 23. Nov. 21, 1942. 58.8 W41

Explains important facts about farm equipment and its every day operations.

LIMITATION order L-170. Northwest Farm Equip. Jour. 56(11): 18-20, 22, 24. Nov. 1942. 58.8 F222

New order places industry under stricter control and, by incorporating provisions of Concentration Program, transfers practically all production of farm machinery and equipment items from large companies to small and intermediate producers.

LYLE, S. P., comp. Partial list of publications of the U. S. Dept. of agriculture and State agricultural extension services and experiment stations on the operation, care, and repair of farm machinery. 13 pp., processed. Washington, U. S. Dept. of agriculture, Extension service, Nov. 1941. 1.913 E5P25

MACHINES always ready. Capper's Farmer 53(11): 10. Nov. 1942. 6 M693

Through systematic repair farmers are keeping their implement and power units constantly in trim for vital job of producing food.

McKIBBEN, E. G., HEADY, E. O. and HOPKINS, J. A. Duty of field machines. Agr. Engin. 23(11): 357, 366, 368. Nov. 1942. 58.8 Ag83

Data presented based on project of the Iowa Agricultural Experiment Station to obtain up-to-date and accurate information on the vital problem of the distribution and use of field machines on Iowa farms.

MEIER, OSCAR W. Problem of estimating farm machine needs. Agr. Engin. 23(11): 352, 355. Nov. 1942. 58.8 Ag83

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PETERSON, V. S. Causes and remedies of binder troubles. Pa. State Col. Ext. Cir. 237, 9 pp. State College, 1942. 275.29 P380

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Custom, contract, cooperative and rental schemes will be advanced by Washington to secure utmost utilization of existing equipment.

RENTAL schedule? Impl. Rec. 39(11): 16-17. Nov. 1942. 58.8 Im73

Farm machinery rental schedule for California.

RICHEY, C. B. Self-help is a sure bet. Country Gent. 112(12): 13, 20, 22-23. Dec. 1942. 6 C833

Cooperative use, pooling and renting of farm machinery is suggested as a means of reducing the labor needed for crop production.

RICHEY, C. B. Trends in hay production. Agr. Engin. 23(11): 345-346. Nov. 1942. 58.8 Ag83

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ROEHL, L. M. Fitting a crosscut saw. Amer. Agr. 139(24): 3, 10. Nov. 21, 1942. 6 Am3

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TENNESSEE. UNIVERSITY. COLLEGE OF AGRICULTURE. DIVISION OF EXTENSION. Farm repairs and tools. Tenn. Agr. Col. Ext. Leaflet 37, 4 pp. Knoxville, 1942. 275.29 T25L

TENNESSEE. UNIVERSITY. COLLEGE OF AGRICULTURE. DIVISION OF EXTENSION. Farmer's plan for machinery upkeep. Tenn. Agr. Col. Ext. Leaflet 35, 4 pp. Knoxville, 1942. 275.29 T25L

TENNESSEE. UNIVERSITY. COLLEGE OF AGRICULTURE. DIVISION OF EXTENSION. Rates for farm machine custom work. Tenn. Agr. Col. Ext. Leaflet 36. 4 pp. Knoxville, 1942. 275.29 T25L

THOMSON: He delivered the goods. Sugar 37(11): 20-21, 23.

Nov. 1942. 65.8 F11

Discusses development of machinery for the sugar cultivation.

TRENNARY, O.J., and PIERCEY, M. S. Tractor level for laying out contour lines. Agr. Engin. 23(11):356. Nov. 1942. 58.8 Ag83

TURNER, C. N. New York's emergency farm machine repair program.

Farm Impl. News 63(24): 20-22. Nov. 26, 1942. 58.8 F22

WALLACE, FRED S. Farm machinery to be rationed. South. Planter 103(11): 10-11. Nov. 1942. 6 So89

The order calling for the rationing of new farm machinery, announced September 17, is explained.

WILKS, T. NEELIST. Deeper ploughing: more plant food. Farmer and Stock-Breeder and Agr. Gaz. 56(2764): 1505. Sept. 29, 1942. 10 F228

How the value of deep ploughing depends on power, implements and time for after-cultivation.

FARM STRUCTURES

CARPENTER, R. W., and KREWATCH, A. V. Agriculture's big building job. Agr. Engin. 23(11): 344, 346. Nov. 1942. 58.8 Ag83

CENTRAL hog house. Hoard's Dairyman 87(21): 591. Nov. 10, 1942. 44.8 H65
Gives plans.

CRIBB, AUBREY. Save with a manure pit. Farm and Dairy 29(8): 5. Oct. 28, 1942. 6 F2279

"Two things are required to save most of the nitrogen and practically all of the phosphorus and potassium in the manure. These are: 1. Use bedding generously to take up the liquids which contain the larger proportion of the fertilizing elements. 2. Store the manure in damp well-compacted piles in a water-tight, weather protected pit."

DOMINY, J. N. Plans for a wartime cowshed. Farmer and Stock-breeder and Agr. Gaz. 56(2766): 1598. Oct. 13, 1942. 10 F228

JOHN, WALTER W. Home-grown farm buildings. Country Gent. 112(12): 17. Dec. 1942. 6 Co833

Discusses use of farm woodlots.

MICHIGAN milk house. Hoard's Dairyman 87(22): 621. Nov. 25, 1942. 44.8 H65

THE milk house. Hoard's Dairyman 87(22): 631. Nov. 25, 1942. 44.8 H65

NEBRASKANS use portable dipping vats. West. Farm Life 44(21): 5, 9. Nov. 1, 1942. 6 R153

SMALL farm buildings can provide year 'round new business. Amer. Lumberman, no. 3244, pp.30-31. Nov. 28, 1942. 99.81 Am3

THREE types of milk houses. Hoard's Dairyman 87(22): 623. Nov. 25, 1942. 44.8 H65

WHITE, CHARLES H. Using home-grown timber for farm buildings. Minn. Univ. Agr. Ext. Bul. 238, 15 pp. University Farm, St. Paul, 1942. 275.29 M66S

Purpose of bulletin is to show that farm wood lot can furnish much of the necessary raw material for improving farm buildings without a large cash outlay. It demonstrates how some farmers have adapted local timber to home use and offers suggestions for the use of hard-woods for better barns, sheds, and houses.

FING

NEW ZEALAND. STATE FOREST SERVICE. Preservative treatment of fencing posts. New Zeal. Jour. Agr. 65(2): 85-91. Aug. 15, 1942.
23 N48J

FERTILIZER PLACEMENT

BEAR, FIRMAN E. Principles of fertilizer application. Natl. Joint Com. on Fert. Appl. Proc. 1941: 29-35. Washington, D.C. [1942?] 57.9 N216

There is every reason to believe that, in soils of high-fixing-capacity, fertilizer should be placed in bands, no matter whether it is dropped on bottom of furrow at plowing time; applied on top of plowed soil before planting; applied so deeply in seed bed as to be undisturbed by subsequent cultivation; or applied along row at planting time. This would appear to be true whether we are thinking of ammonium salts, superphosphate, or muriate of potash, separately, or when supplied in form of mixed fertilizers. By having fertilizer so placed, localized areas of soil become saturated with nutrient elements, and soil's capacity to compete with plant roots, in these zones, is thereby greatly reduced.

BURR, KARL, and CUMINGS, G. A. Effect of fertilizer placement on fields of peas used for frozen pack in Western Washington. Natl. Joint Com. on Fert. Appl. Proc. 1941: 83-87. Washington, D. C. [1942?] 57.9 N216

COLEMAN, RUSSELL. Effect of fertilizer placement upon the yield of cotton. Natl. Joint Com. on Fert. Appl. Proc. 1941: 82. Washington, D. C. [1942?] 57.9 N216

COLLINS, EMERSON R. Survey of experimental work carried on in 1941 in the Southern region. Natl. Joint Com. on Fert. Appl. Proc. 1941: 20-22. Washington, D. C. [1942?] 57.9 N216

Results reported on differential placement of N, P, and K over three-year period indicates advantage for placing phosphoric acid as well as nitrogen and potash in bands to side of seed.

FERTILIZER placement work in the West. Natl. Joint Com. on Fert. Appl. Proc. 1941: 23. Washington, D. C., [1942?] 57.9 N216

GILES, G. W. and others. Power and time requirements of various one-row machine methods of planting and fertilizing cotton. Natl. Joint Com. on Fert. Appl. Proc. 1941: 48-61. Washington, D. C., [1942?] 57.9 N216

Table No. 1, Power and labor requirements of various one-row machine methods of planting and fertilizing cotton.

HUMPHRIES, W. R., and others. Progress report on fertilizer placement tests on cotton in 1941 with available one-mule fertilizer distributors. Natl. Joint Com. on Fert. Appl. Proc. 1941: 65-67. Washington, D. C. [1942?] 57.9 N216

Joint authors: G. B. Killinger, C. S. Patrick, W. N. McAdams, and G. B. Nutt.

LARSON, H. W. E. Results obtained in sidedressing demonstrations on beets and potatoes in Idaho during 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 68-73. Washington, D. C. [1942?] 57.9 N216

MAHONEY, C. H. and others. Summary of Maryland fertilizer-placement experiments on vegetable crops, 1941 (Tomatoes, sweet corn, and cantaloupes). Natl. Joint Com. on Fert. Appl. Proc. 1941: 105-113. Washington, D. C. [1942?] 57.9 N216

MILLAR, C. E., COOK, R. L., and DAVIS, J. F. Effect of fertilizer and borax, applied broadcast and in the row, on the yields and quality of canning beets grown on Emmet sandy loam. Natl. Joint Com. on Fert. Appl. Proc. 1941: 77-79. Washington, D.C. [1942?] 57.9 N216

MILLAR, C. E., and others. Effect of fertilizer placement and fertilizer analyses on the yield and stand of cannery peas at the Michigan experiment station in 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 88-92. Washington, D. C. [1942?] 57.9 N216

R.L. Cook, J. F. Davis, and A.W. McAllister joint authors. MILLAR, C. E., and others. Effect of fertilizer placement on the yield and stand of field beans at the Michigan experiment station in 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 80-81. Washington, D.C. [1942?] 57.9 N216

R.L. Cook, J. F. Davis, and A.W. McAllister joint authors. MILLAR, C. E., and others. Effect of fertilizers, rates, and placements on the yield and stand of soybeans at the Michigan experiment station in 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 93-94. Washington, D. C., [1942?] 57.9 N216

R.L. Cook, J.F. Davis, and A.W. McAllister, joint authors. MILLAR, C. E., and others. Effect of placement of fertilizer containing borax at different concentrations on the yield, stand, and control of heart rot of sugar beets at the Michigan Experiment Station in 1941. Natl. Joint Com. Fert. Appl. Proc. 1941: 74-76. Washington, D. C., [1942?] 57.9 N216

R.L. Cook, J.F. Davis, and A.W. McAllister, joint authors. PHILLIPS, C. E. Sweet potato fertilizer placement Bethel, Delaware - 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 99. Washington, D. C., [1942?] 57.9 N216

SAYRE, CHARLES B. Fertilizer placement experiments in the Northeast region. Natl. Joint Com. on Fert. Appl. Proc. 1941: 16-19. Washington, D. C., [1942?] 57.9 N216

Advantages of deep placement are: 1. Safety. Large amounts of fertilizer can be used without danger of injury to crop. 2. Greater accessibility. From standpoint of positional accessibility, deeply placed fertilizer is in path of normal root development in moist soil, and below area of root pruning by cultivator. 3. Less rapid fixation. This is especially important in availability of potassium. It has been shown that frequent wetting and drying of soil hastens potash fixation. When fertilizer is placed deeper in soil, moisture content is more constant and there is less rapid fixation of potash. 4. Increased drought resistance.

SAYRE, CHARLES B. Fertilizer placement experiments with tomatoes, 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 100-104. Washington, D. C. [1942?] 57.9 N216

SCARSETH, G. D. Report of Midwestern regional committee on fertilizer placement work. Natl. Joint Com. on Fert. Appl. Proc. 1941: 19-20. Washington, D. C., [1942?] 57.9 N216

Interest has grown in possibilities of plowing under some of the fertilizers, particularly where soils are so infertile that more nutrients are needed for row crops, as corn and tomatoes, than are contained in 75 to 150 pounds per acre of common fertilizers.

More attention is being given to diagnosing old fertilizer experiments to determine if they are yielding data that are reliable. Better understanding of importance of balanced nutrition is bringing about corrections in experiments where crop yields have been function of uncontrolled, independent factor instead of function of factor thought to be dependent one.

Considerable interest and some work is associated with studies on accessibilities of fertilizer nutrients to plants during dry periods. Experiments are in progress in Illinois, Michigan, Ohio, and Indiana involving placement of fertilizers deeper in soils so that roots will absorb nutrients out of moist soil better than when nutrients are placed near surface. From various results obtained, however, it appears that plowing under of fertilizers or placing them in bands on plow sole has promising possibilities.

SCHRADER, A. LEE. Effect of fertilizer placement and sources of nitrogen on transplanting Blakemore strawberries. Natl. Joint Com. on Fert. Appl. Proc. 1941: 95-98. Washington, D. C., [1942?] 57.9 N216

VANDECAVEYE, S. C. Survey of the fertilizer placement studies in the Western region in 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 23-25. Washington, D. C., [1942?] 57.9 N216

Points disclosed by 1941 survey of experimental work on fertilizer placement in Western Region are: (1) Manifested interest in fertilizer placement on part of farmers, many of whom eagerly devised variety of make-shift contraptions for control of localized fertilizer placements; (2) Obvious need for greatly expanded program of fertilizer placement research; (3) Urgent need for development of suitable machinery to conduct fertilizer placement research work properly; (4) Adequate facilities and funds to carry on effective program of fertilizer placement research in order that farmer may be supplied with necessary information to make efficient use of fertilizer he buys.

ZIMMERLEY, H. H. Scope of fertilizer placement research activities 1941. Natl. Joint Com. on Fert. Appl. Proc. 1941: 7-9. Washington, [1942?] 57.9 N216

ZIRCKEL, C. H. Report of Farm equipment institute committee to Joint committee on fertilizer application. Natl. Joint Com. on Fert. Appl. Proc. 1941: 28. Washington, D.C., [1942?] 57.9 N216

FIRE PROTECTION

FIGHT is on for farm fire prevention. U.S. Ext. Serv., Ext. Serv. Rev. 13(10): 156. Oct. 1942. 1 Ex892Ex
 STACY, W. H., and BEATY, HAROLD. That rural fire siren! Iowa Agr. Col. Ext. Serv. Iowa Farm Econ. 8(10): 11. Oct. 1942. 275.28 Io92

Cooperative efforts between Iowa farmers and town residents to control farm fires.

TINDALL, CORDELL. He's a fire prevention champion. Mo. Ruralist 83(19): 5. Sept. 26, 1942. 6 R8891

FLOODS AND FLOOD CONTROL

SCOTT, DUNCAN. SCS helps New Mexico farmers to repair flood damage. U.S. Soil Conserv. Serv., Soil Conserv. 8(5): 114-115. Nov. 1942. 1.6 So3S

FLOW OF WATER

JOBES, J. G., and DOUMA, J. H. Testing theoretical losses in open channel flow: Part I. Superelevation at bends. Civ. Engin. 12(11): 613-615. Nov. 1942. 290.8 C49

In design of open channels it is necessary to take into consideration superelevation of water surface around bends. Wall heights must be determined against overtopping in reaches of excessive increase in flow depths. Authors have reviewed and compared existing formulas for computation of superelevation with the results of model experiments and field measurements.

JOBES, J. G., and DOUMA, J. H. Testing theoretical losses in open channel flow. Pt. II. Flow through bridge piers. Civ. Engin. 12(12): 667-669. Dec. 1942. 290.8 C49

Number of formulas are commonly used to compute losses in flow past bridge piers. Increase in flow depths above those computed for equivalent unobstructed reaches is of prime importance in determining necessary pier and wall elevations. Comparison of computed values with model and field measurements has been made. These experiments have led the authors to conclude that formulas can be reliably used in design.

ROUSE, HUNTER. Profile curves for open-channel flow: Discussion. Amer. Soc. Civ. Engin. Proc. 68(9): 1646-1648. Nov. 1942. 290.9 Am3P

TAYLOR, EDWARD H. Flow characteristics at rectangular open-channel junctions. Amer. Soc. Civ. Engin. Proc. 68(9): 1521-1530. Nov. 1942. 290.9 Am3P

The research of which this paper is a part comprised a study of the phenomena associated with the combining and dividing flow of water in open and closed conduits. The paper is concerned only with the open-channel problem, in which the variables involved are so numerous that only an empirical solution seems possible. The conformity of actual behavior to theory is discussed, and an empirical solution is included which may be applied to rectangular channels." - Synopsis, p. 1521.

HYDRAULICS

- KINDSVATER, CARL E. Hydraulic jump in sloping channels. Amer. Soc. Civ. Engin. Proc. 68(9): 1473-1486. Nov. 1942. 290.9 Am3P
Common forms of hydraulic jump in sloping channels have been classified into three general cases, and an analysis is presented which leads to practical method of computing the dimensions of jump. Conclusions drawn from this investigation indicate that experiments on other slopes might eventually yield satisfactory treatment for hydraulic jumps on any slope within practical range.

HYDROLOGY

- HODGES, PAUL V., and JOHNSON, JOE W. Statistical analysis in hydrology: Discussion. Amer. Soc. Civ. Engin. Proc. 68(9): 1661-1669. Nov. 1942. 290.9 Am3P
SEMOUR, CHARLES. Early contributions to Mississippi river hydrology: Discussion. Amer. Soc. Civ. Engin. Proc. 68(9): 1670-1674. Nov. 1942. 290.9 Am3P

INSULATION

- MONTANA. STATE COLLEGE. DEPT. OF RURAL ENGINEERING. It pays to insulate. Mont. Farmer 30(6): 15. Nov. 15, 1942. 6 M764

IRRIGATION

- ADAMS, FRANK, VEIHMAYER, F. J., and BROWN, LLOYD N. Cotton irrigation investigations in San Joaquin valley, California, 1926 to 1935. Calif. Agr. Expt. Sta. Bul. 668, 93 pp. Berkeley, 1942. 100 C12S
Report of a study made "to determine the effect of the different irrigation treatments on main-stem length growth (height of plants), number and length of vegetative branches, blossoming, shedding of squares and bolls, yields of seed cotton, and quality of cotton produced."
KANSAS. STATE BOARD OF AGRICULTURE. Irrigation pumping plants: construction and costs. Kans. State Bd. Agr. Rpt. Oct. 1942. 52 pp. Topeka, 1942. 2 K13Re
LEADLEY, TOM. Irrigation pays dividends in a wet year. Nebr. Farmer 84(23): 4, 26, 28-29, 30. Nov. 14, 1942. 6 N27
LYON, A. V. and TISDALL, A. L. Production of dried grapes in Murray valley irrigation districts. 2. Irrigation, drainage and reclamation. Austral. Council Sci. & Indus. Res. Bul. 149, 35 pp. Melbourne, 1942. 514 Au72B
Summarises the irrigation and drainage studies by officers of the Commonwealth research station, Merbein, as related to all commercial horticulture in the Murray Valley.
MONSON, O. W. Irrigation of seed and canning peas in the Gallatin Valley, Montana. Mont. Agr. Expt. Sta. Bul. 405, 23 pp. Bozeman, 1942. 100 M76

LAND CLEARING

RIPLEY, P. O., ARMSTRONG, J. M., and KALBFLEISCH, W. Land clearing. Canada. Dept. Agr. Farmers' Bul. 111. 43 pp. Ottawa, 1942. 7 C16F

Power machinery for land clearing, pp. 22-28.

LAND UTILIZATION

INDUSTRY and rural development: Editorial. Engin. 154(3997): 151-152. Aug. 21, 1942. 290.8 Em322

Discussion of Report of Lord Justice Scott's Committee on Land Utilisation in Rural Areas. (98.5 G795)

Whole process of putting into practice main recommendations, Committee consider, could be accomplished within five years; and, accordingly, they propose Five-Year Plan, to be put into action as soon as hostilities cease. For first year, they suggest, among other items, that system of land classification for planning should be agreed, procedure for co-operation between various authorities established, and comprehensive investigation of electricity, gas and water supplies should be undertaken and completed. Within ensuing four years, it should then be possible to complete town and country planning schemes to cover whole of England and Wales, indicating industrial zones and location of new settlements and satellite towns; to provide definite number of houses for rural workers; to carry out programmes for supply of electricity, gas and water; and to deal with many other problems, such as creation of National Parks, signposting, control of unsightly erections such as advertisement hordings, petrol stations, etc. Improvement of rural housing they regard as "essential prerequisite of contented countryside"; but revision of rating practice, and provision at reasonable cost of electricity, gas and water to houses and farms is stressed as of hardly less importance.

RURAL amenities. Elect. Rev. 131(3379): 269-271. Aug. 28, 1942. 335.8 EL22

Plans for spreading and cheapening electricity. Division of Scott report on land utilization in rural areas.

LUBRICATION

SPRAGUE, R. D. Lubrication - An insurance against wear.

Impl. & Tractor 57(23): 35, 66. Nov. 7, 1942. 58.8 W41

MILK COOLING

AMERICAN SOCIETY OF REFRIGERATING ENGINEERS. Methods of rating and testing complete can-type milk coolers. Refrig. Engin. 44(5): Between pp.348-349. Nov. 1942. 295.9 Am32J

A.S.R.E. Cir. no.21 -42.

HOW to build a concrete milk-cooling tank - Important item in dairy farm modernization. Amer. Builder and Bldg. Age 64(11): 45,69. Nov. 1942. 296.8 Am3

NICHOLAS, JOHN E., and ANDERSON, T. G. Keeping qualities of milk. Refrig. Engin. 44(6): 370-371, 422. Dec. 1942. 295.9 Am32J

Authors have found that pasteurized milk may be kept in the home refrigerator at 40° F., removed daily, shaken and permitted to stand at room temperature an hour before being returned to storage; under these conditions it will retain high quality from 10 days to two weeks.

TENNESSEE. UNIVERSITY. COLLEGE OF AGRICULTURE. DIVISION OF EXTENSION. For farmers shipping milk in cans cooling pays. Tenn. Agr. Col. Ext. Leaflet 24, 1 pp. Knoxville, 1942. 275.29 T25L

MOTORS, ELECTRIC

WIANT, D. E. Are your motors loafing? Country Gent. 112(12): 13,20. Dec.1942. 6 C833

One electric motor, borrowed from its usual job, can run several farm machines with simple hookups described in paper.

ORCHARD HEATERS

HEATERS may be lighted. Calif. Citrog. 28(2): 39. Dec.1942. 80 C125

Gives official resolution as approved by the ninth regional civilian defense board with respect to the lighting of orchard heaters under dim-out regulations.

POULTRY HOUSES AND EQUIPMENT

HINNERS, SCOTT. Remodeling poultry houses. Prairie Farmer 114 (23): 32. Nov.14, 1942. 6 P883B

PARRISH, C. F., and others. Equipment for poultry. N.C. Agr. Ext. Serv. Ext. Bul. 5. 15 pp., Raleigh, 1942. 275.29 N811W

VANDERVORT, JOHN. Remodeling farm building for poultry. Pa. State Col. Ext. Leaflet 81. folder. State College, 1942. 275.29 P38L

RAINFALL AND RUNOFF

SCHWALEN, HAROLD C. Rainfall and runoff in the upper Santa Cruz river drainage basin. Ariz. Agr. Expt. Sta. Tech. Bul. 95, pp. 421-472. Tucson, 1942. 100 Ar4

REFRIGERATION

COOK, W. H. Humidification of freezers. [11 pp.]. In Canadian committee on storage and transport of food. Collected papers, v.1, 1938-1941, no.30. [n.p., 1941.] 389.9 C164C

COOK, W. H. Precooling of poultry. 245-258 pp. In Canadian committee on storage and transport of food. Collected papers, v.1, 1938-1941, no.8. [n.p., 1941.] 389.9 C164C
Reprinted from Food Research, v.4, no.3, 1939.

MARKLEY, RICHARD, JR. The farm freezer: Its future and its place in the war effort. Refrig. Engin. 44(6): 381-382. Dec. 1942. 295.9 Am32J

SAIR, L. and COOK, W. H. Effect of precooling and rate of freezing on the quality of dressed poultry. 139-152 pp. In Canadian committee on storage and transport of food. Collected papers, v.1, 1938-1941, no.6. [n.p., 1941.] 389.9 C164C
Reprinted from Canadian Journal of Research, Sec.D, v.16, June 1938.

RUBBER

KIRKPATRICK, GRACE. Rubber: How far can we stretch it with these guayule acres? Impl. Rec. 39(11): 18-20. Nov. 1942. 58.8 Im73

SILT

BELL, HUGH S. Stratified flow in reservoirs and its use in prevention of silting. U.S. Dept. Agr. Misc. Pub. 491, 46 pp. Washington, D.C., 1942. 1 Ag84M

Presents new conceptions and new methods for protecting larger reservoirs.

CORFITZEN, W.E. Silt problems. Civ. Engin. 12(11): 616-619. Nov. 1942. 290.8 C49

Influences and results are described.

SNOW SURVEYING

CHURCH, J. E. Organized water. U.S. Soil Conserv. Serv. Soil Conserv. 8(5): 109-113, 115. Nov. 1942. 1.6 So3S
Discusses snow surveying.

SOILS

PORTER, HENRY C. Roadway and runway soil mechanics data. Density and total moisture content of clay soil. Tex. Engin. Expt. Sta. Ser. 68, 27 pp. College Station, July 1, 1942. 290.9 T31

STORAGE OF FARM PRODUCE

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS. COMMITTEE ON HAY HARVESTING AND STORAGE. FARM STRUCTURES GROUP. Results of a study of trends in methods of hay storage. Agr. Engin. 23(11): 349-351. Nov. 1942. 58.8 Ag83

BARRE, H. J., HOLMAN, LEO E., and ELLISON, E. A. Cribbing this 1942 corn. Much of it may not keep if it is picked too soon and isn't stored with considerable care. Farm Sci. Rptr. 3(4): 3-6, 9. Oct. 1942. 275.28 F22

BARRE, H. J., and COTTON, R. T. Recent developments in the farm storage of grain. Feedstuffs 14(43): 35-41. Oct. 24, 1942. References. 286.81 F322

Address "before the Cotton States Branch of the American Association of Economic Entomologists at a meeting in Memphis, Tenn."

A proposed plan of a 200-bushel corn crib for the Southern States is included.

COLE, WILLIAM R. Air cooled storage for apples. New England Home-
stead 115(23): 10. Nov. 14, 1942. 6 N442

Gives suggestions based on Massachusetts State College Bulletin
360, Farm Storage of Apples.

COLE, WILLIAM R. Home storage of vegetables. Mass. Agr. Col. Ext.
Leaflet 34, 8 pp. Amherst, 1942. 275.29 M381L

COOK, W. H., and SAIR, L. Freezing and frozen storage of poultry.
12 pp. In Canadian committee on storage and transport of food.

Collected papers, v. 1, 1938-1941, no. 1. [n. p., 1941] 389.9 C1640

COOK, W. H. Frozen storage of poultry. II. Bloom. 419-424 pp.

In Canadian committee on storage and transport of food. Collected
papers, v. 1, 1938-1941, no. 31. [n. p., 1941] 389.9 C164C

Reprinted from Food Research, v. 4, no. 5, 1939.

COOK, W. H., and WHITE, W. H. Frozen storage of poultry. III. Per-
oxide oxygen and free fatty acid formation. 433-440 pp. In

Canadian committee on storage and transport of food. Collected
papers, v. 1, 1938-1941, no. 32. [n. p., 1941] 389.9 C164C

Reprinted from Food Research, v. 4, no. 5, 1939.

COOK, W. H., and WHITE, W. H. Frozen storage of poultry. IV. Further
observations on surface drying and peroxide oxygen formation.

363-370 pp. In Canadian committee on storage and transport of food.

Collected papers, v. 1, 1938-1941, no. 51. [n. p., 1941]

389.9 C164C

Reprinted from Canadian Journal of Research, v. 18, Oct. 1940.

DOSSIN, C. O., and LEUSCHNER, F. H. Egg rooms that help maintain
egg quality. Pa. State Col. Ext. Leaflet 85, folder. State Col-
lege, 1942. 275.29 P38L

EAVES, C. A. Physiology of apples in artificial atmospheres. 315-
338 pp. In Canadian committee on storage and transport of food.

Collected papers, v. 1, 1938-1941, no. 3. [n. p., 1941]

389.9 C164C

Reprinted from Scientific Agriculture, v. 18, no. 6, Feb. 1938.

FARM storage of grain. Farm and Ranch Rev. 38(11): 8, 31. Nov. 1942.
7 F223

Piling on ground; use portable granaries; snow fencing; circula-
tion of air.

HOBLYN, T. N. Study of the variation in keeping quality of apples in
store: as illustrated by the behaviour of the variety McIntosh Red
from an Ontario apple orchard. 129-170 pp. In Canadian committee
on storage and transport of food. Collected papers, v. 1, 1938-1941,
no. 11. [n. p., 1941] 389.9 C164C

HUFFINGTON, JESSE M. Storing vegetables. Pa. State Col. Ext. Leaflet
84, folder. State College, 1942. 275.29 P38L

NEELY, GRACE I. Storing food surpluses in wartime. Tex. Agr. Col.
Ext. Food Production Ser. no. 17, 2 pp. College Station, 1942.
275.29 T312Fo

NORGAARD, U. J., and GILBERTSON, G. I. Is your stored grain safe?
Grain with more than 14 percent moisture, or unprotected from in-
sects and rodents is in danger. S. Dak. Agr. Col. Ext. Leaflet 1,
folder. Brookings, 1939. 275.29 So85E

- PHILLIPS, W. R. Application of controlled atmospheres in the storage of fruits. 66-68 pp. In Canadian committee on storage and transport of food. Collected papers, v. 1, 1938-1941, no. 13. [n. p., 1941] 389.9 C164C
- PHILLIPS, W. R. Construction and operation of a home storage for fruits and vegetables. Canada. Dept. Agr. Farmers' Bul. 113, 14 pp. Ottawa, 1942. 7 C16F
- POWELL, A. A. Heat storage of onions. New Zeal. Jour. Agr. 65(3): 153-155. Sept. 15, 1942. 23 N48J
Discusses practical method of prolonging life of stored onions and preventing wastage.
- WALFORD, E. J. M. Studies of the tomato in relation to its storage. I. A survey of the effect of maturity and season upon the respiration of greenhouse fruits at 12.5° C. 65-83 pp. In Canadian committee on storage and transport of food. Collected papers, v. 1, 1938-1941, no. 2. [n. p., 1941] 389.9 C164C
Reprinted from Canadian Journal of Research, Sect. C, v. 16, Feb. 1938.
- YOUNG, O. C. Freezer studies-II. [6 pp.] In Canadian committee on storage and transport of food. Collected papers, v. 1, 1938-1941, no. 52. [n. p., 1941] 389.9 C164C
Reprinted from Progress Reports no. 45 of the Fisheries Research Board of Canada.

TERRACING

- MARTIN, G. E., and GOWDER, M. T. Farming terraced fields. Tenn. Agr. Col. Ext. Leaflet 33, 4 pp. Knoxville, 1942. 275.29 T25L

TIRES

- FARM truck tires will last only 2 years. Prairie Farmer 114(24): 11. Nov. 28, 1942. 6 P883B
- ILLINOIS. AGRICULTURAL EXPERIMENT STATION. Tire-use expectancy of trucks hauling farm products, Illinois 1942: A graphic summary. Ill. Agr. Expt. Sta. AE1949, 18 pp., processed. Urbana, 1942. 275.29 I162P
- KREYER, J. G. Increasing tire life. Impl. & Tractor 57(23): 28-29, 74-75. Nov. 7, 1942. 58.8 W41
- NEW TYRES of steel for farm vehicles. Agr. Gaz. N. S. Wales 53(9): 442. Sept. 1, 1942. 23 N472
Engineers have evolved all-steel wheel 3 ft. in diameter with minimum tire width of 6 in. To absorb shock formerly taken by pneumatic tire there are two coil springs between axle bed and cart, kept in line by sliding pin in grooves. On trials over heavy clay land, with wheels frequently up to axles in mud, effort of 500 lb. per ton load was needed, compared with 300 for pneumatic tires. A road test with two tons over 7-mile trip at 10 and 15 miles per hour, showed rubberless trailers to be quite as good as those with pneumatic tires. Outstanding among features of these wheels is that they are not committed for all time to steel tires; pneumatics can be added when available.

TRACTORS

EASTERBROOK, L. F. Tractors take over British farms. Capper's Farmer 53(11): 22. Nov. 1942. 6 M693

Tractors in Britain increased from 52,000 in June 1939 to 111,000 last March. In 1939, estimated expenditure of farmers on machinery was between 24 and 32 million dollars. Tractors apart from tractor plows, increased during war by over 60,000, disk harrows by 22,000, and threshing machines by 1,900. And there have been similar increases in number of binders, drills, manure spreaders, potato diggers, milking machines and barn machinery.

HOLLENBERG, A. H. Care of farm tractors. Calif. Cult. 89(22): 547. Oct. 31, 1942. 6 C12

VENTILATION

STERE, J. B. Good cow air that saves barns. Elec. on the Farm 15(11): 4-6, 24. Nov. 1942. 335.8 E127

Account of some inexpensively ventilated barns in Pennsylvania, providing dry, fresh air, not too cold, in below zero weather. Removed odors; kept barns comfortable; saved decay; cost \$2 per cow to install; two Kw-hrs. per cow per month to use.

WATER SUPPLY

LANDAVERDE, ARNULFO. Como aprovechar mejor las aguas pluviales y de riego en agricultura. Amer. Sci. Cong. Proc. (1940) 5: 143. Washington, D. C., 1942. 330.9 Am3008

LEUSCHNER, F. H. Supplying water to the laying flock. Pa. State Col. Ext. Leaflet 80, folder. State College, 1942. 275.29 P38L

MYERS, F. E., & BRO. CO. Maintenance of pumps and water systems to forestall needless service calls. Farm Impl. News 63(23): 38-39. Nov. 12, 1942. 58.8 F22

MYERS, F. E., & BRO. CO. Water system service. Impl. & Tractor 57(23): 26, 68-69. Nov. 7, 1942. 58.8 W41

What to check when hand pumps or water systems fail; gives instructions to prevent freezing.

PARKER, GLENN L., and others. Surface water supply of the United States, 1940. Part 2, south Atlantic slope and eastern gulf of Mexico basins. U. S. Geol. Survey. Water-Supply Paper 892, 441 pp. Washington, D. C., 1942. 407 G29W

Prepared in cooperation with the states of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Virginia.

PARKER, GLENN L., and others. Surface water supply of the United States, 1940: Part 5, Hudson bay and upper Mississippi river basins. U. S. Geol. Survey. Water-Supply Paper 895, 340 pp. Washington, D. C., 1942. 407 G29W

In cooperation with the states of Illinois, Indiana, Iowa, Minnesota, Missouri, North Dakota and Wisconsin.

PIPER, ARTHUR M. Ground-water resources of the Willamette valley, Oregon. U. S. Geol. Survey. Water-Supply Paper 890, 194 pp. Washington, D. C., 1942. 407 G29W

Prepared in cooperation with the Oregon Agricultural Experiment Station, Department of Soils.

TENNESSEE. UNIVERSITY. COLLEGE OF AGRICULTURE. DIVISION OF EXTENSION. Water is vital in food production. Tenn. Agr. Col. Ext. Leaflet 38, 1 p. Knoxville, 1942. 275.29 T25L